Section 1: 10-K (FORM 10-K)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2018
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number 001-38231

Switch, Inc.
(Exact name of registrant as specified in its charter)

Nevada	**82-1883953**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
7135 S. Decatur Boulevard Las Vegas, NV	**89118**
(Address of principal executive offices)	(Zip Code)

(702) 444-4111
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Class A common stock, par value $0.001	**New York Stock Exchange**

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the

Exchange Act.

Large accelerated filer ☐	Accelerated filer ☑
Non-accelerated filer ☐	Smaller reporting company ☐
	Emerging growth company ☑

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

As of June 29, 2018 (the last business day of the registrant's most recently completed second fiscal quarter), the aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates based on the closing price on that date as reported by the New York Stock Exchange was $553.9 million.

As of March 1, 2019, the registrant had 55,577,650 shares of Class A common stock, 148,481,538 shares of Class B common stock, and 42,944,647 shares of Class C common stock outstanding.

Documents Incorporated by Reference

Portions of the registrant's definitive Proxy Statement for the 2019 annual meeting of the stockholders to be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year ended December 31, 2018 are incorporated by reference into Part III of this Annual Report on Form 10-K.

Switch, Inc.
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Signatures

BASIS OF PRESENTATION

As used in this Annual Report on Form 10-K (this “Form 10-K”), unless the context otherwise requires, references to:

- “we,” “us,” “our,” the “Company,” “Switch” and similar references refer to Switch, Inc., and, unless otherwise stated, all of its subsidiaries, including Switch, Ltd., and, unless otherwise stated, all of its subsidiaries.
- “Members” refer to the Founder Members, Non-Founder Members and Former Incentive Unit Holders.
- “Founder Members” refer to Rob Roy, our Founder, Chairman and Chief Executive Officer, and an affiliated entity of Mr. Roy, each of which own Common Units (as defined below) and who may exchange their Common Units for shares of our Class A common stock. As the context requires in this Form 10-K, “Founder Members” also refers to the respective successors, assigns and transferees of such Founder Members permitted under the Switch Operating Agreement and our amended and restated articles of incorporation.
- “Non-Founder Members” refer to those direct and certain indirect owners of interest in Switch, Ltd., other than the Founder Members, each of which own Common Units and who may exchange their Common Units for shares of our Class A common stock. The Non-Founder Members include (i) each of our named executive officers, other than Mr. Roy and (ii) Tom Thomas and Donald D. Snyder, members of our board of directors. As the context requires in this Form 10-K, “Non-Founder Members” also refers to the respective successors, assigns and transferees of such Non-Founder Members permitted under the Switch Operating Agreement and our amended and restated articles of incorporation.
- “Former Incentive Unit Holders” refer collectively to (i) our named executive officers; (ii) an affiliated entity of Mr. Roy, our Founder, Chief Executive Officer and Chairman; (iii) Mr. Snyder, a member of our board of directors; and (iv) certain other current and former non-executive employees, in each case, who held incentive units in Switch, Ltd. and whose incentive units converted into Common Units of Switch, Ltd. in connection with our initial public offering (“IPO”).
- “Common Units” refer to the single class of issued common membership interests of Switch, Ltd.
- “Switch Operating Agreement” refers to the Fifth Amended and Restated Operating Agreement of Switch, Ltd.

Part I.

Item 1. Business.

What We Are

Switch is a technology infrastructure company powering the sustainable growth of the connected world and the Internet of Everything. Our mission is to enable the advancement of humanity by creating smart, resilient and sustainable infrastructure solutions that support the most innovative technology ecosystems.

Company Overview

We believe the future of the connected world depends on the sustainable and cost-effective growth of the internet and the services it enables. Using our technology platform, we provide solutions to help enable that growth. We believe we are a pioneer in the design, construction and operation of some of the world's most reliable, secure, resilient and sustainable data centers. Our advanced data centers reside at the center of our platform and provide power densities that exceed industry averages with efficient cooling, while being powered by 100% renewable energy. Two of our data centers are the only carrier-neutral colocation facilities in the world to be certified Tier IV Design, Tier IV Facility and Tier IV Gold in Operational Excellence. While these certifications have been the highest classifications available in the industry, we are building our current facilities to our proprietary Tier 5® Platinum standards, which exceed and are more comprehensive than Tier IV standards. Our platform has powerful network effects and nurtures a rich technology ecosystem that benefits its participants. We further enhance these benefits as we innovate and expand our platform ecosystem. We currently have more than 850 customers, including some of the world's largest technology and digital media companies, cloud and managed service providers, financial institutions and telecommunications providers.

The growing nexus between internet connectivity, internet-based services, data and analytics, and the advancement of computational processing power is rapidly expanding the amount of data that enterprises can access and manage. At the same time, the Internet of Everything is exponentially expanding the available data sources, as utility grids, automobiles, aircraft, home appliances, wearable devices and numerous other sources are all connecting to the internet. The compute capacity necessary to manage and analyze this data is also advancing and demanding increasing amounts of power to operate. We believe that traditional technology infrastructure is not capable of supporting the growing wave of mission critical data and increasingly powerful IT equipment.

The vast majority of our data centers are greenfield construction, and our critical infrastructure components are purpose-built to satisfy customers' needs, drive efficiency and enable the deployment of highly advanced computing technologies. We build our facilities using Switch Modularly Optimized Designs, or Switch MODs. These designs allow us to rapidly deploy or replace infrastructure to meet our customers' current and future data storage and compute requirements. Additionally, our patented designs have redefined traditional data center space and cooling, allowing our customers to achieve significantly higher power densities than are available in traditional data centers. We believe the combination of these design elements reduces our operational costs, minimizes investment risk and positions us to adapt as the Internet of Everything continues to evolve. Our technologies were all designed and invented by our founder, Rob Roy, and are protected by over 550 issued and pending patent claims. Since the opening of our first colocation facility, we have delivered 100% uptime across all of our facilities.

We presently operate three primary campus locations, called Primes, which encompass 11 colocation facilities with an aggregate of up to 4.4 million gross square feet, or GSF, of space. These facilities have up to 455 megawatts, or MW, of power available to them. Our Primes consist of The Core Campus in Las Vegas, Nevada; The Citadel Campus near Reno, Nevada; and The Pyramid Campus in Grand Rapids, Michigan. In addition, we are currently constructing a fourth Prime, The Keep Campus, in Atlanta, Georgia. Our Primes are strategically located in geographies that combine a low risk of natural disaster, favorable tax policies for customers deploying computing infrastructure and low latency connectivity to major metropolitan markets, such as Los Angeles, San Francisco, Silicon Valley, Chicago, New York, Northern Virginia and Miami. As a result, customers in these metropolitan markets can access our advanced colocation facilities while reducing exposure to the higher taxes, higher cost of power and higher risk of natural disaster that might be prevalent in other markets. In addition to our Primes, SUPERNAP International, S.A., or SUPERNAP International, our international joint venture, has deployed facilities in Italy and Thailand that collectively provide up to 904,200 GSF of space, with up to 100 MW of power available to these facilities. We can also use our Switch MOD technology to build single-user facilities, and we are considering opportunities to deploy this technology in a build-to-suit offering for our enterprise customers.

We have fostered the development of a robust technology ecosystem around our platform that consists of enterprises and service providers that include cloud and managed services providers and telecommunications carriers. Both our platform and our ecosystem have self-reinforcing network effects that benefit participants as both our platform and our ecosystem grows. As our platform and customer base expands, we continue to realize growing efficiencies of scale, which allows us to provide higher value services to our customers.

We believe our advanced platform, high level of service and competitive pricing create a disruptive offering with a powerful customer value proposition that differentiates us from many other existing solutions. Our advanced data centers are designed for efficiency and allow our customers to achieve higher than average power densities per cabinet with appropriate cooling, which we believe improves the performance and increases the life of our customers' equipment. We located our data centers in areas with tax benefits, such as low or no sales tax on equipment, and access to competitively priced renewable power, both of which help further lower our customers' total cost of ownership. Finally, our Combined Ordering Retail Ecosystem, or CORE, service aggregates our customers' buying power, and can significantly lower many of our customers' connectivity costs. We believe the power of our customer value proposition is evidenced by our customer loyalty and low annual churn rate, which we define as the reduction in recurring revenue attributed to customer terminations or non-renewal of expired contracts, divided by revenue at the beginning of the period. Our average annual churn rate was 0.7% over the three years ended December 31, 2018 and 0.5% for the year ended December 31, 2018.

We believe that our technologies enable attractive cash flow yields on invested capital. Our modular expansion and vertically integrated development approach allows us to deploy capital efficiently, which further increases our yields. Across our current facilities, we generated on average a 16.3% cash flow yield on invested capital in 2018. We define cash flow yield on invested capital as Adjusted EBITDA less income taxes and maintenance capital expenditures, divided by property and equipment, net, less construction in progress.

Our revenue has grown from $207.3 million in 2014 to $405.9 million in 2018, representing a compound annual growth rate, or CAGR, of 18.3%. Our net income for the years ended December 31, 2014, 2015 and 2016 was $56.5 million, $73.5 million and $31.4 million, respectively. Our net loss for the year ended December 31, 2017 was $8.6 million and included a charge of $71.3 million in non-recurring equity-based compensation expense related to the accelerated vesting of certain incentive units upon our IPO and fully vested awards granted under our 2017 Incentive Award Plan. Our net income for the year ended December 31, 2018 was $29.3 million. From 2014 to 2018, our Adjusted EBITDA grew from $112.2 million to $201.7 million, representing a CAGR of 15.8%. For the definition and reconciliation of net income (loss) to Adjusted EBITDA, a non-GAAP financial measure, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Metrics and Non-GAAP Financial Measures" within Part II, Item 7 of this Form 10-K.

Our Opportunity

Industry Background

Computational processing power continues to advance, and the amount of data that enterprises must manage, analyze and monitor is dramatically increasing. The rapid rise in data traffic and the world's reliance on the internet to deliver services and information is making the collection, storage and transfer of data one of the largest challenges created by the internet. The power requirements and financial costs to support this growth in data, traffic and storage are massive and growing. At the same time, service provider data centers are only beginning to penetrate the data center market.

Industry Limitations

Despite the continued growth of traditional data center infrastructure and the continued demand for the public cloud due to its cost-effectiveness and pay-as-you-go scalability, we believe that traditional data center infrastructure and the public cloud are not optimally suited to support the growing wave of mission critical enterprise data applications and increasingly powerful IT equipment for several reasons, including the following:

First, we believe that increases in server density are beginning to strain the current power and cooling capacity of traditional colocation data centers. As IT hardware advances, servers increase in power but decrease in size, generating more heat and requiring more cooling per cabinet. Chip feature sizes have been repeatedly scaled down to fit more transistors in smaller chips. The nodes on a chip shrank from 30,000 nanometers, or nm, in 1963 to 14 nm in 2016, and are expected to reach 5 nm by 2026. We expect these trends will require many traditional data center companies and enterprise-built data center facilities to attempt to retrofit their existing infrastructure to

accommodate the additional weight of denser cabinets and the additional equipment necessary to power and cool those cabinets. Current designs typically include raised floors and cooling equipment installed on the ceiling or roof. Retrofitting these designs, even if possible, would be time-consuming, expensive and highly disruptive to existing customers, and may still not allow a data center to keep pace with technological advances.

Second, we believe that the public cloud is not an ideal solution for certain business critical data storage and computing needs. Large or sophisticated workloads may be expensive to run in the public cloud or may require higher availability and reliability than the public cloud provides. Enterprises with sensitive or regulated data, such as financial institutions and healthcare companies, may be unwilling or unable to use the public cloud for security-related or compliance reasons. In addition, some workloads require an active-active environment, which necessitates two physical environments in close proximity to each other. Further, the public cloud’s shared servers are not an efficient computing environment to run analytics such as advanced machine-learning algorithms, analyze sensitive medical device data or manage autonomous vehicle networks.

Third, given the limitations of both the public cloud and the enterprise-built facilities, we expect enterprises to increasingly deploy IT equipment across hybrid cloud and colocation environments, with mission critical data stored at a colocation facility. As a result, the resiliency and security of the colocation facilities will take on even greater importance. There are significant business risks and potential costs associated with running mission-critical applications in a physical environment that is not 100% resilient and secure. These costs include lost revenue, damage to mission critical data, damage to equipment, legal and regulatory impact, and decline in brand value and reputation. In some instances, the costs can be significantly higher.

Finally, we believe that enterprises are beginning to recognize significant value from environments that encourage and facilitate interaction among their various constituents. The deeper and broader the participation that occurs within the environment, the greater the value to the various participants. As a result, data centers can add significant additional value by bringing together enterprises, cloud and managed services providers and telecommunications carriers in an environment that fosters communication, collaboration and innovation. We believe these elements will be difficult to find among traditional colocation data centers.

We believe a significant opportunity exists for data centers that can address the shortcomings of traditional colocation facilities, enterprise-built facilities and public cloud offerings.

Our Competitive Strengths

We believe we distinguish ourselves from typical colocation providers and other technology infrastructure companies through our competitive strengths, which include:

Purpose-Built, Highly-Resilient, Patented Solutions

Our critical infrastructure components are purpose-built to satisfy customers’ needs, drive efficiency and enable the deployment of highly advanced computing technologies, and our designs are protected by over 550 issued and pending patent claims. Our Switch MODs allow us to rapidly deploy or replace infrastructure as our customers’ needs evolve. We believe this reduces operational costs, minimizes investment risk and facilitates our ability to adapt as the Internet of Everything continues to evolve.

We have redefined data center space and cooling, allowing our customers to achieve higher power densities than they can in traditional data centers. Our power densities enable our customers to include more IT equipment per cabinet than in typical data center environments, which can reduce space requirements and the associated monthly costs and set-up costs and drive down in-cabinet latency. Additionally, we believe our ability to run more powerful cabinets at the appropriate temperature improves performance and extends the life of our customers’ equipment. This results in lower total cost of ownership for our customers.

We have the only carrier-neutral colocation facilities in the world to be certified Tier IV Design, Tier IV Facility and Tier IV Gold in Operational Excellence, all of which were among the highest classifications available in the industry at the time. This requires fully redundant systems and total fault tolerance. We utilize the most stringent operational protocols to ensure our customers’ infrastructure is always on. As such, we have delivered 100% uptime across all of our facilities since the opening of our first colocation facility. In an effort to increase transparency and enhance the reliability of data center rating standards, we also introduced a proprietary Tier 5® Platinum standard. This standard exceeds the Tier IV Gold certifications and incorporates more than 30 additional elements critical to data center design and constant operation. These elements include even more stringent parameters regarding long-

term power system capabilities, the number of available carriers, zero roof penetrations, the location of cooling system lines in or above the data center, physical and network security and 100% use of renewable energy. We currently build our facilities to this Tier 5® Platinum standard.

Differentiated Technology Ecosystem Underscored by Powerful Network Effects

We operate a dynamic technology ecosystem that brings together a wide variety of parties. Many of the participants in our ecosystem collaborate and engage in commerce with one another to enhance their own businesses. As we continue to innovate, we believe our customer value proposition strengthens, attracting new customers and encouraging existing customers to grow with us. This expanding, diverse mix of enterprise customers attracts cloud service providers, managed services providers and telecommunications carriers. This growing base of service providers, in turn, attracts other new enterprise customers seeking an environment with diverse, high-quality service providers and other innovative companies with which to collaborate.

The powerful Switch technology ecosystem creates value for our enterprise customers in the form of telecommunications purchasing, robust service provider access, private interconnection alternatives among enterprise customers and the opportunity to collaborate with other participants in our ecosystem. For example, our CORE service aggregates our customers' buying power and can significantly lower customers' connectivity costs. The ecosystem yields intrinsic value for us by lowering our customer acquisition costs and enhancing our customer value proposition, which we believe drives further customer loyalty. In addition, because many of our customers choose to run mission-critical and advanced applications within our facilities, we gain exposure to emerging technologies. We believe this provides us with unique visibility into future trends and bolsters our ability to plan for evolving needs.

Commitment to Sustainability

We believe that while data runs the planet, it should not ruin the planet. We were the only company recognized by Greenpeace in its most recent Clicking Clean report (2017) as having a 100% clean energy index. Our energy index was higher than every other technology company identified in the report, including Apple, Facebook, Google, Microsoft and Salesforce. Additionally, we were the only company in the report to receive an "A" grade in all five categories measured by Greenpeace, and our overall "A" grade outperformed all of the other data center operators, including Equinix, which received a clean energy index of 20% and a "B" grade, Digital Realty Trust, which received a clean energy index of 21% and a "C" grade, and DuPont Fabros, which received a clean energy index of 7% and an "F" grade. We believe that many technology and infrastructure companies, as well as their customers and clients, evaluate progress towards achieving clean energy goals by reference to the company scorecards included in the Greenpeace report.

Through technological innovation, industry partnerships and public advocacy, we also support renewable energy production facilities. While we are proud of our achievements in safeguarding the future of our planet, we believe our achievements in sustainability also drive customer demand. More than ever, enterprises are searching for solutions to address their own clean energy goals. Deploying IT equipment within a Switch data center helps our customers achieve their green energy objectives and reduce their carbon footprint.

Our Strong and Trusted Brand

Trust, innovation and perfection are hallmarks of the Switch brand.

We recognize the level of trust customers place in us to house and protect their IT equipment. We operate under the slogan "Truth in Technology," which embodies the notion that the product should be so amazing that nothing more than the truth is necessary to sell it. We endeavor to further safeguard our customers' trust by striving to deliver perfection in all that we do, and we are proud to have delivered 100% uptime across all of our facilities. However, we are never satisfied, and we continually strive to innovate and deliver novel solutions for the emerging challenges our customers face as technology and business needs evolve.

We have grown our customer base primarily through industry and customer referrals, and our customers tend to increase their spending with us over time, demonstrating the power of our brand and the quality of our solutions.

Visionary and Experienced Leadership Underscored by a Culture of Innovation and Execution

Our Founder, Chief Executive Officer and Chairman, Rob Roy, is a serial "inventrepreneur" who is a recognized expert in advanced end-to-end solutions for mission-critical facilities. Rob Roy first invented his design for the Switch MOD more than a decade ago and since then has added numerous inventions and corresponding patent claims to the Switch portfolio. The designs of our data center facilities are protected by over 550 issued and pending patent claims documenting inventions by Rob Roy.

Rob Roy has instilled in us the practice of "Switchful Thinking"— the state of constant willingness to change and adapt and to produce the best solutions through innovation and invention. We were built and are led by a management team of technology futurists who believe that everything is possible through listening, intellectualizing, forming a plan and executing.

We have a deep and experienced senior management team who collectively have over 150 years of experience at Switch and a majority of whom have been with Switch for more than five years.

Our goal is to enable the current and future compute needs of our customers and to facilitate technological advancement through smart and sustainable infrastructure solutions designed to support the most innovative technology ecosystems in the world. To accomplish this, we plan to:

- ***Continue to Grow Our Existing Prime Campus Locations.*** We currently operate The Core Campus, The Citadel Campus and The Pyramid Campus in or near Las Vegas, Reno and Grand Rapids, respectively, and have begun development for The Keep Campus in Atlanta. These Primes currently encompass 11 data centers with an aggregate of up to 4.4 million GSF of space and up to 455 MW of power available to these facilities. We plan to continue to expand these Primes and actively pursue additional customers with strategic fit for our ecosystem, as well as sell additional solutions to existing customers. Each of our Primes has room for expansion.
- ***Expand into New Geographies in the United States.*** We recently secured land and began development for The Keep Campus to expand geographically into the southeast and mid-Atlantic United States. We believe this approach, combined with our ability to deploy capital efficiently through our modular design, reduces the risks associated with our geographic expansion and enhances the strategic value of our new locations.
- ***Leverage Our Unique Technology Ecosystem to Drive Interconnection Growth.*** Our ecosystem connects more than 850 customers, including over 250 cloud, IT and software providers and 80 network and telecommunications providers, which creates an important hub for the Internet of Everything. We plan to support our customers' interconnection needs by continuing to increase our cross connect and external broadband offerings.
- *M**aintain and Extend Our Technological Leadership.*** We have a long history of innovation and, led by Rob Roy, we are a dynamically inventive organization. We plan to continue to invest in the development of new technologies in order to continue improving our standards for security, availability and scalability. Additionally, we intend to leverage our patented technologies and designs to strategically pursue new, adjacent market opportunities outside our core business. By leveraging our technology and leadership in data center design, we believe we can solve new problems created by the rapid expansion of the internet, data storage and analytics.
- ***Pursue Strategic Partnerships.*** We may enter into strategic relationships with a variety of partners that contribute to our business. For example, rather than simply offering our customers connectivity to public cloud environments, frequently referred to as being an "on ramp" to the cloud, we may partner with public cloud providers to address that portion of their customers' needs that require higher density and reliability than is typically available from public cloud offerings. To facilitate these potential partnerships, we plan to expand in locations alongside hyperscale cloud deployments enabling us to provide colocation for cloud customers' mission critical needs.

Our Technology

Our Solution

We design, construct and operate hyperscale data centers that address the growing challenges facing the data center industry. Key elements of our data centers include:

Modularly Optimized Design

The modular design of our data centers is enabled by our patented Switch MOD products. The Switch MOD architecture allows us to build colocation data centers of various sizes by combining multiple Switch MODs into a single structure. For example, at The Core Campus, each of our LAS VEGAS 8, LAS VEGAS 9, LAS VEGAS 10 and LAS VEGAS 11 facilities were constructed by combining multiple Switch MODs. Combining Switch MODs allows for shared power sources and increased operational efficiency.

We can also build any of our Switch MODs in a single-user configuration. This provides an alternative to traditional colocation for customers with large, dedicated compute and data storage needs. Regardless of whether they are used for colocation or single-user purposes, we design, manufacture and operate our Switch MODs to meet our proprietary Tier 5® Platinum standard.

The Switch POWER SPINE is an innovative adaptation allowing increased modularity in data center architecture. The Switch POWER SPINE provides the structure and pathway to provision power from any power room to any cabinet within the data center. This allows for the delivery of additional circuits to any cabinet over many years in an efficient and organized fashion. The POWER SPINE also reduces construction costs by placing the overhead weight of the heavy power conduits on the concrete steel-reinforced slab on grade floor, reducing the roof load and infrastructure needed to support that load. Placing the POWER SPINE on the grade floor also increases the seismic integrity of the facility.

The Switch Power Distribution Units, or PDUs, are part of our system-plus-system color-coded power components, which provide modular power and allow the data center to deliver 100% power uptime.

Power Density and Cooling Capacity

One of the most significant challenges faced by traditional colocation facilities is the need to increase their power density and cooling capacity to keep pace with the increases in IT equipment power requirements and heat exhaustion. Traditional data centers are designed with a raised floor and internal Computer Room Air Conditioner, or CRAC, units that take up valuable floor space. In these traditional environments, the hot air exhausted by IT equipment blends with the cold air provided by the CRAC units, which causes the temperature to rise. As customers add more equipment, the data center operator must install additional internal CRAC units. Customers in these traditional data centers are required to leave portions of the cabinets empty to reduce the amount of heat coming out of the cabinet, which forces the customer to buy additional space for their equipment to accommodate these cooling restrictions. We expect many traditional colocation facilities will be required to attempt to retrofit their infrastructure, if possible, to accommodate the additional weight of denser cabinets and the additional equipment necessary to power and cool those cabinets. Without these retrofitting changes, we believe these traditional colocation facilities will not be able to accommodate the newer servers or the higher densities required by customers who want to run them.

We have developed patented technologies that have redefined data center space and cooling, allowing customers to deploy high density and scalable IT architectures to support demanding and mission critical workloads. Our data centers are designed to enable us to adapt to customers’ needs for increased power and densities without retrofitting our existing facilities. These technologies include:

- ***100% Hot Aisle Containment Rows.*** We refer to our patented 100% Hot Aisle Containment Row technology as the Switch T-SCIF, or Thermal Separate Compartment in Facility, or the Chimney Pod. As depicted in the figure below, the T-SCIF (Chimney Pod) creates a fully contained hot aisle between parallel rows of cabinets. The heat from the customers’ equipment exhausts into the hot aisle, where it vents up into a hot-air plenum and out of the data center via extraction fans. Simultaneously, cold air is released from the overhead vents in the cold room into the intakes of the IT equipment in the cabinets, which cools the equipment. The exhausted hot air is never allowed to blend back into the cold room, which helps ensure that our customers’ IT equipment operates in the correct environmental conditions. Using this cooling method, we are able to cool power levels that significantly exceed those of traditional data centers. Our ability to support these increased densities enables our customers to use and buy

less cabinet space to house their equipment, which reduces the cost of their deployment. Similarly, the ability to handle these increased densities allows us to deploy more power on less space, driving a higher return on capital.

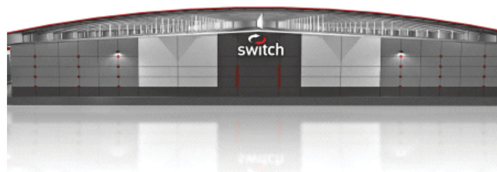
- ***Exterior Wall Penetrating Multi-Mode HVAC Units.*** We provide cooling to the T-SCIFs using our patented Exterior Wall Penetrating Multi-Mode heating, ventilation and air conditioning, or HVAC, units that we refer to as the TSC 500, TSC 600 and TSC 1000. The units are attached to the exterior wall of the Switch MOD, which alleviates the cost of reinforcing the data center floor or roof to support the weight of HVAC equipment, while also enabling complete segregation of hot and cold air in the data center. The exterior location of our TSC units eliminates the need to bring water into the data center, frees up valuable IT space for cabinet deployments and allows us to repair or replace any single TSC without disrupting the data center environment. Each of our TSC 500, TSC 600 and TSC 1000 units can take advantage of multiple modes of cooling depending on the environment, which enables us to construct facilities that can be cooled entirely without water. We believe this combination of cooling methods makes our facilities the most efficient and resilient large-scale commercial data centers ever constructed.

- ***Hot and Cold Containment Segregation Structure.*** The Switch BLACK IRON FOREST is the framework that supports the weight of the 100% Hot Aisle Containment Rows within a T-SCIF, the ceiling for the heat containment chamber, the power delivery pathways for each uninterruptible power system, or UPS, and cabinet system-plus-system PDU. This increases the stability and integrity of our facilities by distributing all overhead weight to a concrete steel-reinforced slab on grade floor. This structure is also connected horizontally across the facility, which increases the physical stability of the facility. In addition, this structure's thermal qualities help efficiently maintain the temperature within the data center because all of this metal gets cold from all the cold air blowing on it all the time, and stays cold, radiating cold air through the room and helping to keep the room cold.

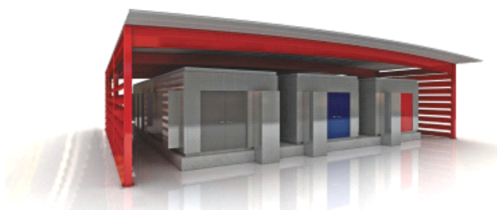
Resiliency

Another challenge faced by all data centers is the ability to assure customers that their IT equipment remains operational despite utility power outages or other unplanned occurrences. Since the opening of our first colocation facility, we have delivered 100% uptime to our customers. To accomplish this, we have implemented a tri-redundant design, consisting of three separate power systems with no single points of failure. Additionally, each power system contains its own generators and UPSs. Effectively, one entire system can experience a failure without our customers experiencing any downtime. Other proprietary elements that contribute to our resiliency include:

- ***Redundant Data Center Roofing System.*** Switch SHIELD is a patented system consisting of an inner roof and outer roof that are separated by nine feet. Both roofs are solid steel, unpenetrated, watertight, airtight, and rated to withstand winds up to 200 miles per hour. If the outer roof is damaged, the inner roof still protects our customers' IT equipment. Switch SHIELD mitigates extreme weather conditions and, with its dual-roof architecture, allows the maintenance, repair or replacement of the roof components while protecting the critical system operations of the data center below, even during a full roof replacement.



- ***Multi-System Power Containers.*** The Switch POD, or Power Optimized Delivery, consists of a separate, color-coded, tri-redundant system in a system-plus-system configuration. This tri-redundant design reinforces our mission-critical focus on delivering 100% power uptime.



- ***Data Center Infrastructure Management System (DCIM).*** The advanced infrastructure solutions that power, cool, connect and protect our data centers are monitored and optimized with our Living Data Center, or LDC, software. This Switch-developed and supported software monitors all the critical infrastructure of the data center macro-environment and the micro-environments for each customer. Our customers can securely access data pertaining to each of their deployments on a real-time basis as LDC dynamically updates and displays information synthesized from thousands of sensors deployed throughout each facility.

Our Campus Locations

As of December 31, 2018, we had the following Prime Campuses operating or under development at strategic locations in the United States, encompassing 11 data centers and 4.4 million GSF of space:

- ***The Core Campus.*** The Core Campus in Las Vegas, Nevada, currently encompasses nine separate data centers with up to approximately 2.3 million GSF of space and up to 315 MW of 100% renewable power available to these facilities. In the fourth quarter of 2018, we opened one additional data center at The Core Campus, providing up to 340,000 GSF of additional space and have up to 40 MW of 100% renewable power available to the facility. The Core Campus location offers approximately 5- and 6-millisecond latencies to Southern California and Phoenix, respectively.
- ***The Citadel Campus.*** The Citadel Campus near Reno, Nevada, is designed to be the world's largest data center campus. Our first data center in The Citadel Campus, which we believe will be the largest data center in the world upon completion, opened in November 2016. This data center is designed to include up to approximately 1.4 million GSF of space and have up to 130 MW of 100% renewable power available to the facility. We have plans to build seven additional data centers at The Citadel Campus that will provide up to 5.9 million GSF of additional space and have up to 520 MW of 100% renewable power available to the facilities. The Citadel Campus location offers approximately 4-millisecond latency to Northern California.
- ***The Pyramid Campus.*** The Pyramid Campus is our Northeastern Prime and is located in Grand Rapids, Michigan. It was designed to be the largest data center campus in the eastern United States. The first data center space became available in the Switch Pyramid, an adaptive reuse of the former Steelcase Pyramid, in June 2016. The Switch Pyramid is designed to include up to 220,000 GSF of data center floorspace and have up to 10 MW of 100% renewable power available to the facility. The Pyramid Campus is planned to include up to two additional data centers that will provide up to approximately 940,000 GSF of additional space and have up to 100 MW of 100% renewable power available to the facilities. We expect to construct these facilities as necessary to meet customer demand. In addition to serving the Michigan market, The Pyramid Campus location offers approximately 4-millisecond latency to Chicago.
- ***The Keep Campus.*** The Keep Campus is our Southeastern Prime under development and located in Atlanta, Georgia. We began developing the campus in June 2017 and began construction in the fourth quarter of 2017, with data center space currently planned to be available in late 2019.

The Core Campus and The Citadel Campus are connected through a fiber network known as the Switch SUPERLOOP. The Switch SUPERLOOP gives customers the advantages of a highly available yet low latency fiber network in close proximity to the major markets of California, but without the high taxes, the high cost of power or the high risk of natural disasters associated with California. The latency between The Core Campus and The Citadel Campus locations is approximately 7 milliseconds using the Nevada portion of the SUPERLOOP. This connectivity enables customers to deploy mission-critical infrastructure and workloads in a large active-active data center configuration. It also provides geographical redundancy of data center deployments while staying within Nevada's tax-advantaged business climate. Through our carrier partners, the Switch SUPERLOOP location also provides approximately 4-millisecond connectivity from The Citadel Campus to the Bay Area and approximately 5-millisecond connectivity from The Core Campus to Southern California (round trip).

We carefully chose the locations of our U.S. campuses based on characteristics that we believed would help drive resiliency, performance and cost efficiencies for our customers. Our Prime campus locations are located in areas with low natural disaster risk. For example, the State of Nevada boasts the lowest natural disaster rating in the Western United States. Additionally, each of these locations offers favorable tax and economic development policies that provide zero or low-tax environments for our customers to deploy IT equipment. While all of our locations offer a lower-cost source of 100% renewable power, there are additional efficiency advantages. For

example, the Nevada climate is characterized by low humidity and relatively stable temperatures for most of the year. This improves cooling efficiencies and reduces power consumption. We own most of our facilities, and where the land and shell are not owned, we hold long-term leases on those assets.

In addition to our Primes, SUPERNAP International has deployed facilities in Italy and Thailand that collectively provide up to 904,200 GSF of space, with up to 100 MW of power available to the facilities.

Our Platform Has Powerful Network Effects and Nurtures a Rich Technology Ecosystem

Our technology infrastructure platform supports a dynamic technology ecosystem bringing together enterprises and service providers, including cloud and managed services providers and telecommunications carriers. Participants benefit from the proximity to these service providers, customers and collaborators. Our platform and our ecosystem have independent but synergistic self-proliferating network effects that benefit participants as we continue to innovate, our platform evolves and our ecosystem grows.

As we continue to improve and enhance our technology, we believe our customer value proposition grows stronger. In turn, our ability to deliver increasing value to our customers attracts new customers and encourages existing customers to grow with us.

Our Technology Ecosystem Creates Significant Value and Has Powerful Network Effects

Our hyperscale data centers are akin to a large and dynamic digital city, which is home to a wide variety of technology citizens. These citizens engage in commerce with each other and collaborate to enhance their offerings to the world in general. All benefit from the density of our facilities, the proximity to each other and the opportunity to interact in a safe, secure and stable environment. Our ecosystem includes numerous enterprises from a wide variety of business segments, many of which are operating their most dense deployments and hosting mission-critical data and applications. These enterprises attract other participants within the ecosystem, such as cloud platform providers, managed services providers and telecommunications carriers that we refer to collectively as ecosystem service providers.

In turn, the presence of these ecosystem service providers attracts other new enterprise customers seeking to collaborate with our ecosystem service providers. This further differentiates our ecosystem by increasing customer diversity and the range of mission-critical applications run within a single campus. We proactively foster an environment where technology companies can connect and innovate on various projects, which further increases participation in the ecosystem.

The powerful Switch technology ecosystem envisioned by Rob Roy creates value for our enterprise customers, such as:

- ***Telecommunications Purchasing.*** The scale of our campuses attracts a robust network of telecommunications carriers to our facilities that is mutually beneficial to our customers and the carriers. The size and diversity of customers in our campuses generate significant demand for connectivity, while at the same time providing a cost effective entry point for carriers. Because of Rob Roy's inventions, Switch can fit a significantly larger number of customers into each data center campus, therefore on-net telecommunications carriers can sell large quantities of services to this ecosystem of customers. Our CORE purchasing cooperative aggregates the buying power of our customers, enabling us to provide significant cost-savings on connectivity, while also maintaining a flexible and expansive carrier partner ecosystem from which our customers can choose. Customers can use CORE to acquire connectivity services outside of our campuses.
- ***Service Provider Access.*** Our Switch CLOUD ecosystem provides our customers with direct access to more than 250 cloud and managed services providers and the flexibility to leverage the right mix of on- and off-premise public and private cloud services. By establishing these connections within our facility, our customers enjoy low-latency, highly secure and flexible access to multiple cloud providers to meet their unique business requirements.
- ***Interconnectivity.*** Our ecosystem connects more than 850 customers, including over 250 cloud, IT and software providers and more than 80 network and telecommunications providers, which enhances our customers' ability to inter- and cross-connect. The ability for customers to privately interconnect has many benefits including reducing costs, optimizing performance and satisfying regulatory requirements. Interconnecting within our data center allows customers to avoid the expense associated with long-haul

dedicated connectivity and provides reduced latency and higher availability. By cross-connecting within our facilities, regulated entities can avoid the need to exchange traffic over the internet, thereby satisfying regulatory security requirements in a more cost-efficient manner.

- ***Collaborative Innovation.*** Our dedicated sales team is driven to help our customers connect, innovate and develop technologies of the future and actively works to foster collaboration amongst our ecosystem participants. Our sales force is empowered and encouraged to build positive relationships and foster interaction between our customers on a platform grounded in truth. This is part of our Truth in Technology commitment.

Our technology ecosystem also creates intrinsic value for Switch, such as:

- ***Visibility into Future Technologies.*** Our customers run some of their most mission-critical and advanced applications in our hyperscale facilities and our exposure to that technology gives us unique visibility into future trends and allows us to plan for future needs.
- ***Lower Customer Acquisition Costs.*** Our ecosystem attracts customers. This natural and self-reinforcing phenomenon results in less time and money spent acquiring customers.
- ***Customer Loyalty.*** Our ecosystem helps support our strong customer value proposition, which in turn creates customer loyalty. We believe this loyalty is evidenced by our low annual churn rate, which averaged approximately 0.7% over the three years ended December 31, 2018 and 0.5% for the year ended December 31, 2018. Additionally, our customers regularly expand their deployments within our facilities. For example, approximately 70% of the increase in revenue for the year ended December 31, 2018 was attributable to growth from existing customers, while the remaining 30% of the increase in revenue was attributable to new customers initiating service after December 31, 2017.

Our Customer Scale and Density allows us to offer Collaborative Services

As our platform and customer base continues to expand, we continue to realize growing efficiencies and benefits of scale at each of our Primes. Our large and growing customer base within each Prime has provided us with the economies of scale necessary to provide our customers valuable ancillary services, such as Switch CONNECT and Switch SAFE.

- ***Switch CONNECT.*** Switch CONNECT provides telecommunications audit and agency services that help our customers evaluate network needs and purchase substantially discounted telecommunications services through CORE, our purchasing cooperative. CORE aggregates the buying power of the over $6 trillion combined market capitalization of the customers in our ecosystem. Our Switch CONNECT team has achieved savings in excess of 50% for our customers compared with their previous telecommunications spend.
- ***Switch SAFE.*** Switch SAFE provides our customers with a large scale, always-on distributed denial of service (D/DoS) attack mitigation platform. We work with customers to understand attack profiles and configure networks to respond to the evolving threat landscape. Switch SAFE is capable of managing attacks of up to 300 gigabits-per-second and 220 million packets-per-second from a single device, allowing our customers to keep their mission critical services up and running.

Our customer density results in a multiplicity of technology enterprises in the same location, which creates a powerful environment for both our enterprise customers and our ecosystem service providers. We believe these customer densities and volumes enable our ecosystem service providers to earn a desirable return on their capital investment, even with the discounted rates we negotiate on behalf of our customers.

These collaborative services create even greater value for our customers and ecosystem service providers alike, creating a self-reinforcing feedback loop.

Our Customers

We have more than 850 customers, including some of the world’s largest technology and digital media companies, cloud, IT and software providers, financial institutions and network and telecommunications providers. Our customer base is meaningfully diversified across key industries, including approximately 24% in cloud, IT and software, 17% in digital media and entertainment, 18% in retail and consumer goods, 12% in financial and 10% in

network and telecommunications as of December 31, 2018. In each of these industries we have marquee customers who have grown with us over time. We believe that we have a significant opportunity to both grow penetration of existing customers as well as attract new customers. For the years ended December 31, 2018 and 2017, our top 10 customers accounted for approximately 36.3% and 38.5% of revenue, respectively, and only one customer, eBay, Inc. and its affiliates, accounted for more than 10% of revenue during each year.

We provide our customers with a consistent experience and high level of service at low cost, which enables us to maintain one of the lowest churn rates in the industry and the lowest of any publicly reporting data center company that reports churn rate metrics. From 2016 to 2018, our annual churn rate averaged 0.7%. Our early customers remain loyal to us today.

Sustainability

Since January 1, 2016, we have powered all of our U.S. data centers with 100% clean and renewable energy. We are the largest data center operator in the United States to be 100% renewably powered, and we support local and new renewable facilities. We have successfully accomplished this goal through a combination of technological innovation, capital investment, industry partnerships and public advocacy. Many of our customers and potential customers are looking for ways to achieve their “green” goals and reach desired levels of sustainability, which other colocation solutions cannot provide. By locating their IT equipment with us, they are able to advance on those goals and improve on their current level of sustainability. Elements of our sustainability efforts include the following:

- ***Clicking Clean Scorecard.*** In recognition of our efforts, Greenpeace awarded us “A” grades in all five categories measured by Greenpeace in its most recent Clicking Clean Company Scorecard (2017). We were the only company in the United States that received all “A” grades, and we were recognized as the leader among colocation data centers evaluated in the study. We believe that many technology and infrastructure companies, as well as their customers and clients, evaluate progress towards achieving “clean energy” goals by reference to the company scorecards included in this report.
- ***Leading Power and Cooling Efficiency.*** Our technology results in significant efficiencies enabling annual Power Usage Effectiveness, or PUE, of 1.28. We do not believe other colocation data center providers are able to maintain such a low PUE while simultaneously allowing customers to operate at very high power densities. We accomplish all of this without compromising our adherence to industry best standards. Our facilities are 100% green and operate at a level that exceeds the standards of IEEE, ANSI, ASHRAE, 24/7, ISO 9001, SAS 70/SSAE-16, BICSI and the Green Grid Association.
- ***Supporting New and Local Solar.*** In 2016, we partnered with the local Nevada utility to construct Switch Station 1 and Switch Station 2, which are two solar power stations in Las Vegas, Nevada having a combined 179 MW of nameplate capacity.
- ***Energy Market Direct Access.*** We were the first entity since 2005 to seek the right to unbundle from the electric monopoly in Nevada. By leaving the monopoly and being able to purchase power from the broader electric market, we have greater freedom to control the energy we use, including the ability to lock in our commodity pricing for longer periods, purchase renewable energy from economical resources and effectuate broader national policy change. We received Nevada regulatory approval in December 2016, and since June 1, 2017, we have been buying our power directly from the national market, as opposed to buying it from the incumbent electrical power utility. We have seen savings from this direct national energy market participation.

Our Values

Our core values govern how every Switch employee executes on our mission to power the sustainable growth of the connected world and include:

- ***Truth in Technology.*** Our customers place a significant level of trust in us to provide them the best technology solutions for their business. Our sales professionals are not incentivized in any way to promote any particular configuration, product or business solutions pathway to our customers.
- ***Sustainable by Design.*** Sustainably running the internet has been a core value since our founding. Our commitment does not stop there. We thoughtfully pursue the advancement of new, innovative policies that expand access to smart water, clean energy and the technological advances that are changing the way the world is powered. We focus on sustainability on multiple levels and have adopted

internal policies focused on reducing plastic bottle waste, utilizing biodegradable tableware and recycling.

- ***Committing to Our Communities through Economic Development.*** We believe in building strong communities wherever we operate. We drive and will continue to push economic development through the creation of Rob Roy's InNEVation Centers. The centers were created by Rob Roy to support the New Nevada Initiative. We like to say that we take the "no" out of innovation. These economic hubs support startups, growups and our customers in collaborating with non-profits, educators, community and thought leaders and "inNEVators" of all shapes and sizes to engage with each other and drive economic results in the communities in which we operate.
- ***Leading the Industry and beyond in Gender Equality and Veteran Placement.*** We believe our workforce is richly diverse in its total composition at all levels and outpaces our industry in the number of women executives. Women hold high-level technical positions throughout our company, including chief responsibility for construction, information and solutions architecture, branding and customer operations. Veterans provide another critical backbone of our workforce. We honor their service and actively recruit veterans to our mission-critical environment. Through our Switch University, we have pioneered strategic partnerships with community colleges to develop a work force that is prepared for the careers that run the Internet of Everything in our data centers.
- ***Supporting Interdisciplinary Education Blending Technology and the Arts.*** We believe that combining education, technology and the arts creates a powerful platform for the future of our country and its market competitiveness. We have collaborated with universities to bring about improvements in research through our donations of supercomputers and connectivity to help accelerate their standing in the critical world of higher education research. We are also passionate about funding programs that build school gardens to connect youth to science through hands-on experiential learning. We bring financial commitment and thought leadership to preparing the next generation of whole-mind thinkers through an unwavering commitment to interdisciplinary Science, Technology, Engineering, the Arts and Mathematics (STEAM) education programs in Nevada, Michigan, Georgia and in any state where we operate. Switch proudly supports First Robotics winning teams in Nevada and Michigan, the STEAM Education Village at Art Prize in Grand Rapids, the Nevada Museum of the Arts STEAM School, and the Smith Center for Performing Arts STEAM Programs. We believe that the best creative problem solvers who can integrate form and function with equal mastery through science, technology, engineering, arts and math education platforms will run the internet of absolutely everything with both form and function in mind.
- ***Karma: Our culture is grounded in the philosophy of doing the right thing.*** Innovation, detail and excellence drives everything from the interior architecture of our environments to our delivery of 100% uptime. We do it all with dedication to providing world-renowned facilities, superior service for our customers, the best working experience in the industry, true technology leadership and deep caring for the communities where we operate and the planet where we live. Our logo mark was personally designed by Rob Roy to put the power of karma at the center of our company. We believe that if you put good energy out, you will get good energy back.

Sales and Marketing

Our sales strategy is built around "Truth in Technology." Our team works closely with each customer to identify that customer's needs and to design a solution tailored to meet those needs. They also help to integrate each customer into our ecosystem, which provides access to Switch Connect and Switch Cloud and potentially the ability to connect directly with their existing and potential customers. Many of our customers encourage their customers, suppliers and business partners to place IT equipment in our data centers, which has created a network effect resulting in additional customer acquisitions. In addition, large network providers, cloud providers or managed services providers may refer customers to us as part of their total customer solution. These processes have resulted in significant customer growth with limited spend on sales and marketing. Selling and marketing expenses include sales and marketing labor costs, direct branding and selling expenses, as well as administrative and travel and entertainment expenses for our marketing and sales departments. Selling and marketing expenses exclude sponsorships, contributions and lobbying expenses.

We use a direct sales force and selected partner relationships to market our offerings to global enterprises, content providers, financial companies and mobile and network service providers. We have a robust colocation sales team who combined offer nearly 50 years of experience as members of our team. Our culture is one which

fosters a team environment and allows our sales representatives to offer the customer the solution they need without artificial sales pressure. We believe that the strength of our product and market reputation are the biggest reasons for increased sales activity.

To support our sales efforts and to promote our brand proactively, we have active and experienced branding and marketing teams. Our marketing strategies include active public relations and ongoing customer communications programs. We also regularly measure customer satisfaction levels and host key customer forums to identify and address customer needs. We believe our brand is one of our most valuable assets, and we strive to build recognition through our website, external blog and social media channels, by sponsoring or leading industry technical forums, by participating in internet industry standard-setting bodies and through advertising and online campaigns.

Competition

We offer a broad range of data center services and, as a result, we may compete with a wide range of data center service providers for some or all of the services we offer. We face competition from numerous developers, owners and operators in the data center industry, including managed services providers and real estate investment trusts, or REITs, such as CoreSite Realty Corporation, CyrusOne Inc., Digital Realty Trust, Inc., Equinix, Inc. and QTS Realty Trust, Inc., some of which own or lease data centers, or may do so in the future, in markets in which our properties are located. Additionally, we are aware of other companies that may compete against us in various geographies or that may be developing additional data center capabilities to compete with us. Our current and future competitors may vary by size and service offerings and geographic presence.

Competition is primarily centered on reputation and track record, quality and availability of data center space, quality of service, technical expertise, security, reliability, functionality, geographic coverage, financial strength and price. Some of our current and future competitors may have greater brand recognition, longer operating histories, stronger marketing, technical and financial resources and access to less expensive power than we do. As a result, some of our competitors may be able to:

- offer space at prices below current market rates or below the prices we currently charge our customers;
- bundle colocation services with other services or equipment they provide at reduced prices;
- develop superior products or services, gain greater market acceptance and expand their service offerings more efficiently or rapidly;
- adapt to new or emerging technologies and changes in customer requirements more quickly;
- take advantage of acquisition and other opportunities more readily; and
- adopt more aggressive pricing policies and devote greater resources to the promotion, marketing and sales of their services.

We operate in a competitive market and we face pricing pressure for our services. Prices for our services are affected by a variety of factors, including supply and demand conditions and pricing pressures from our competitors. We may be required to lower our prices to remain competitive, which may decrease our margins and adversely affect our business prospects, financial condition and results of operations.

Employees

As of December 31, 2018, we had 731 employees. We collaborate with the local unions where applicable, such as construction and the trades; however, none of our direct employees are represented by a labor union or covered by a collective bargaining agreement. We believe our employee relations are good and we have not experienced any work stoppages.

Regulation

General

Data centers in our markets are subject to various laws, ordinances and regulations. We believe that each of our properties has the necessary permits and approvals for us to operate our business.

Americans with Disabilities Act

Our properties must comply with Title III of the Americans with Disabilities Act of 1990, or the ADA, to the extent that such properties are “public accommodations” or “commercial facilities” as defined by the ADA. The ADA may require, for example, removal of structural barriers to access by persons with disabilities in certain public areas of our properties where such removal is readily achievable. We believe that our properties are in substantial compliance with the ADA and that we will not be required to make substantial capital expenditures to address the requirements of the ADA. However, noncompliance with the ADA could result in imposition of fines or an award of damages to private litigants. The obligation to make readily achievable accommodations is an ongoing one, and we will continue to assess our properties and to make alterations as appropriate in this respect.

Environmental Matters

We are required to obtain a number of permits from various government agencies to construct a data center facility, including the customary zoning, land use and related permits, and are also subject to laws and regulations relating to the protection of the environment, the storage, management and disposal of hazardous materials, emissions to air and discharges to water, the cleanup of contaminated sites and health and safety matters. These include various regulations promulgated by the Environmental Protection Agency and other federal, state and local regulatory agencies and legislative bodies relating to our operations, including those involving power generators, batteries, and fuel storage to support colocation infrastructure. While we believe that our operations are in substantial compliance with environmental, health and human safety laws and regulations, as an owner or operator of property and in connection with the current and historical use of hazardous materials and other operations at its sites, we could incur significant costs, including fines, penalties and other sanctions, cleanup costs and third-party claims for property damages or personal injuries, as a result of violations of or liabilities under environmental laws and regulations. Fuel storage tanks are present at many of our properties, and if releases were to occur, we may be liable for the costs of cleaning up resulting contamination. Some of our sites also have a history of previous commercial operations, including past underground storage tanks.

Some of the properties may contain asbestos-containing building materials. Environmental laws require that asbestos-containing building materials be properly managed and maintained, and may impose fines and penalties on building owners or operators for failure to comply with these requirements.

Environmental consultants have conducted, as appropriate, Phase I or similar non-intrusive environmental site assessments on recently acquired properties and if appropriate, additional environmental inquiries and assessments on recently acquired properties. Nonetheless, we may acquire or develop sites in the future with unknown environmental conditions from historical operations. Although we are not aware of any sites at which we currently have material remedial obligations, the imposition of remedial obligations as a result of spill or the discovery of contaminants in the future could result in significant additional costs to us.

Our operations also require us to obtain permits and/or other governmental approvals and to develop response plans in connection with the use of our generators or other operations. These requirements could restrict our operations or delay the development of data centers in the future. In addition, from time to time, federal, state or local government regulators enact new or revise existing legislation or regulations that could affect us, either beneficially or adversely. As a result, we could incur significant costs in complying with environmental laws or regulations that are promulgated in the future.

Intellectual Property

Intellectual property is an important aspect of our business, and we actively seek protection for our intellectual property. To establish and protect our proprietary rights, we rely upon a combination of patent, trade secret, trademark and copyright laws. We also utilize contractual means such as confidentiality agreements, licenses and intellectual property assignment agreements. We maintain a robust policy requiring our employees, contractors, consultants and other third parties to enter into confidentiality and proprietary rights agreements to control access to our proprietary information. These laws, procedures and restrictions provide only limited protection, and any of our intellectual property rights may be challenged, invalidated, circumvented, infringed or misappropriated. Furthermore, the laws of certain countries do not protect proprietary rights to the same extent as the laws of the United States, and we therefore may be unable to protect our proprietary technology in certain jurisdictions.

As of December 31, 2018, we have 17 granted or allowed U.S. patents and patent applications by the USPTO comprising 333 granted or allowed claims. We also have 17 pending U.S. patent applications comprising 248 patent pending claims. The first of our patents begin expiring on or around June 13, 2028 subject to our ability

to extend the term under applicable law. In addition to capturing additional innovations and inventions generated by Switch and its founder Rob Roy, we continually review our development efforts to assess the existence and patentability of new intellectual property. We actively pursue the registration of our domain names, trademarks and service marks in the United States, including new generic top-level domains, and in certain locations outside the United States. To protect our brand, we file trademark registrations in some international jurisdictions, and actively monitor online activities of others. As of December 31, 2018, we also had more than 165 trademark class registrations and pending applications for more than 270 trademark class registrations in the United States and foreign countries. We have also registered more than 750 domain names, including www.switch.com, www.switch.net, www.switch.org.

We have engaged in limited licensing of our intellectual property and there is the potential to further monetize our intellectual property in this manner in the future. Currently, we deploy our intellectual property for our own benefit and leverage our registrations to prevent mimicry by others.

Our Portfolio

The following chart provides various metrics relative to our portfolio as of December 31, 2018:

Campus[1]	Year Operational	Gross Square Feet (up to)[2]	Utilization % - By Campus[3]	Utilization % - By Open Sector[3]	Power Capacity (up to)[4]
The Core Campus[5]					
Current: 9 Facilities[6]	2003-2018	2,340,000	78%	91%	315 MW
The Citadel Campus					
Current: TAHOE RENO 1	2016	1,360,000	30%	58%	130 MW
Future: 7 Facilities	2020+	5,890,000			520 MW
The Pyramid Campus					
Current: Switch PYRAMID	2016	430,000			
		(Office)			
		220,000	52%	88%	10 MW
		(Data Center)			
Future: 2 Facilities	2020+	940,000			100 MW
The Keep Campus					
Future	2019	1,100,000			110 MW
U.S. Total (Current)		**4,350,000**			**455 MW**
U.S. Total (Future)		**7,930,000**			**730 MW**

(1) SUPERNAP International has also deployed two additional data centers in Milan, Italy and Bangkok, Thailand that collectively provide up to 904,200 GSF of space, with up to 100 MW of power available to these facilities. We hold a 50% ownership interest in SUPERNAP International.
(2) Estimated square footage of all enclosed space at full build out.
(3) Utilization numbers are based on available cabinets. The Citadel Campus and The Pyramid Campus opened in the second half of 2016 and are in the first phase of development. Additional capital investment will be required to reach full build out.
(4) Defined as total power delivered to the data center at full build out.
(5) We lease a data center building and the underlying land for three of our data centers at The Core Campus that have non-cancellable terms expiring through 2066.
(6) Current facilities at The Core Campus include LAS VEGAS 2, LAS VEGAS 4, LAS VEGAS 5, LAS VEGAS 7, LAS VEGAS 8, LAS VEGAS 9, LAS VEGAS 10, LAS VEGAS 11 and LAS VEGAS 12.

Organizational Structure and Corporate Information

Switch, Inc. is a Nevada corporation formed on June 13, 2017 in connection with our IPO. We are a holding company and our principal asset is our equity interest in Switch, Ltd. Our principal executive offices are located at 7135 S. Decatur Boulevard, Las Vegas, Nevada 89118, and our telephone number is (702) 444-4111. Our website address is www.switch.com.

Initial Public Offering

On October 11, 2017, we completed our IPO of 35,937,500 shares of Class A common stock at a public offering price of$17.00 per share, which includes 4,687,500 shares issued pursuant to the underwriters' option to purchase additional shares. We received approximately $577.3 million in proceeds, net of underwriting discounts and commissions and before offering expenses of $4.9 million, which we used to purchase newly issued Common Units from Switch, Ltd. at a price per Common Unit equal to the IPO price per share of our Class A common stock.

In connection with the IPO, we completed a series of organizational transactions, including the following:

- we amended and restated Switch, Ltd.'s existing operating agreement to, among other things, convert all of the Former Incentive Unit Holders' incentive units into Common Units and appoint Switch, Inc. as the manager of Switch, Ltd.;
- we amended and restated our articles of incorporation to, among other things, provide for Class A common stock, Class B common stock and Class C common stock; and
- we issued shares of Class B common stock to the Non-Founder Members on a one-to-one basis with the number of Common Units they owned, for nominal consideration, and shares of Class C common stock to the Founder Members on a one-to-one basis with the number of Common Units they owned, for nominal consideration.

See Note 1 to the consolidated financial statements included in Part II, Item 8 for more information about the above-mentioned transactions as well as the other transactions completed in connection with the IPO. As of December 31, 2018, we owned 22.7% of Switch, Ltd. and the noncontrolling interest holders owned the remaining 77.3% of Switch, Ltd.

Although we have a minority economic interest in Switch, Ltd., we have the sole voting interest in, and control the management of, Switch, Ltd. Accordingly, we consolidate the financial results of Switch, Ltd. and report a noncontrolling interest on our consolidated statements of operations and comprehensive income (loss), representing the portion of net income or loss and comprehensive income or loss attributable to the other members of Switch, Ltd.

Additional Information

All reports we file with the SEC are available free of charge via EDGAR through the SEC website at www.sec.gov. We also provide copies of our Forms 8-K, 10-K and 10-Q, Proxy Statement, Annual Report and amendments to those documents at no charge to investors upon request and make electronic copies of such reports available through our website at investors.switch.com as soon as reasonably practicable after filing such material with the SEC. The information found on, or otherwise accessible through, our website is not incorporated by reference into, nor does it form a part of, this Form 10-K, or any other document that we file with the SEC.

Cautionary Note Regarding Forward-Looking Statements

This Form 10-K contains forward-looking statements within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. Forward-looking statements generally relate to future events or our future financial or operating performance. In some cases, you can identify forward-looking statements because they contain word such as "may," "will," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans or intentions. Forward-looking statements contained in this Form 10-K include, but are not limited to, statements about:

- our goals and strategies;
- our expansion plans, including timing for such plans;
- our future business development, financial condition and results of operations;
- the expected growth of the data center market;
- our beliefs regarding our design technology and its advantages to our business and financial results;
- our beliefs regarding opportunities that exist in the data center market due to current industry limitations;
- our expectations regarding opportunities to grow penetration of existing customers and attract new customers;
- our beliefs regarding our competitive strengths and the value of our brand;

- our expectations regarding our revenue streams and drivers of future revenue;
- our expectations regarding our future expenses, including anticipated increases;
- our expectations regarding demand for, and market acceptance of, our services;
- our expectations regarding our customer growth rate;
- our beliefs regarding the sufficiency of our cash and access to liquidity, and cash generated from operating activities, to satisfy our working capital and capital expenditures for at least the next 12 months;
- our intentions regarding sources of financing for our operations and capital expenditures;
- the network effects associated with our business;
- our plans to further invest in and grow our business, and our ability to effectively manage our growth and associated investments;
- our ability to timely and effectively scale and adapt our existing technology;
- our ability to successfully enter new markets;
- our expectations to enter into joint ventures, strategic collaborations and other similar arrangements;
- our beliefs regarding our ability to achieve reduced variability of power costs as an unbundled purchaser of energy;
- our beliefs that we have the necessary permits and approvals to operate our business and that our properties are in substantial compliance with applicable laws;
- our ability to maintain, protect and enhance our intellectual property and not infringe upon others' intellectual property;
- our beliefs regarding the adequacy of our insurance coverage;
- our beliefs regarding the effectiveness of efforts to improve our internal control over financial reporting;
- our plans regarding our Common Unit repurchase program;
- our expectations regarding payment of dividends; and
- our expectations regarding payments under the Tax Receivable Agreement, contingent upon our taxable income and the applicable tax rate.

We qualify all of our forward-looking statements by these cautionary statements. The forward-looking statements in this Form 10-K are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. The most important factors that could prevent us from achieving our goals and cause the assumptions underlying forward-looking statements and the actual results to differ materially from those expressed in or implied by the forward-looking statements include, but are not limited to, the following:

- our ability to successfully implement our business strategies;
- our ability to effectively manage our growth and expansion plans;
- delays or unexpected costs in development and opening of data center facilities;
- any slowdown in demand for our existing data center resources;
- our ability to attract new customers and achieve sufficient customer demand to realize future expected returns on our investments;
- our ability to license space in our existing data centers;
- the geographic concentration of our data centers in certain markets;
- local economic, credit and market conditions that impact our customers in these markets;
- the impact of delays or disruptions in third-party network connectivity;
- developments in the technology and data center industries in general that negatively impact us, including development of new technologies, adoption of new industry standards, declines in the technology industry or slowdown in the growth of the Internet;
- our ability to adapt to evolving technologies and customer demands in a timely and cost-effective manner;
- financial market fluctuations;
- our ability to obtain necessary capital to fund our capital requirements and our ability to continue to comply with covenants and terms in our credit instruments;
- our ability to generate sufficient cash flow to meet our debt service and working capital requirements;
- our ability to collect revenues on a timely basis;
- fluctuations in interest rates and increased operating costs, including power costs;
- significant disruptions, security breaches, including cyber security breaches, or system failures at any of our data center facilities;
- our ability to effectively compete in the data center market;

- our ability to protect our intellectual property rights and not infringe upon others' intellectual property rights;
- loss of significant customers or key personnel;
- losses in excess of our insurance coverage, including due to natural disasters and other unforeseen damage;
- impact of the outcome of pending or future litigation;
- the impact of future changes in legislation and regulations, including changes in real estate and zoning laws, ABA, environmental and other laws that impact our business and industry;
- future increases in real estate taxes;
- early termination of data center leases or inability to renew on commercially acceptable terms;
- our ability to successfully identity and consummate future joint ventures, acquisitions or other strategic transactions;
- our realization of any benefit from the Tax Receivable Agreement, our Common Unit repurchase plan and our organizational structure;
- our ability to sufficiently remediate the material weaknesses identified in our internal control over financial reporting;
- volatility of our stock price, including due to future issuances of our Class A common stock upon redemption or exchange of Common Units; and
- our ability to successfully estimate the impact of certain accounting and tax matters, including the effect on our company of adopting certain accounting pronouncements.

The foregoing list of important factors does not include all such factors, nor necessarily present them in order of importance. In addition, you should consult other disclosures made by us (such as in our other filings with the SEC or in company press releases) for other factors that may cause actual results to differ materially from those projected by us. For a further discussion of the risks relating to our business, see "Item 1A—Risk Factors" in Part I of this Form 10-K.

Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Item 1A. Risk Factors.

Investing in our Class A common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information included in this Form 10-K, including "Management's Discussion and Analysis of the Financial Condition and Results of Operations" and the consolidated financial statements and the related notes. We cannot assure you that any of the events discussed below will not occur. Our business, financial condition and results of operations could be materially and adversely affected by any of these risks or uncertainties. In that case, the trading price of our Class A common stock could decline, and you may lose all or part of your investment. All forward-looking statements made by us or on our behalf are qualified by the risks described below.

Risks Related to Our Business

A slowdown in the demand for data center resources and other market and economic conditions could have a material adverse effect on us.

Adverse developments in the data center market or in the industries in which our customers operate could lead to a decrease in the demand for data center resources, which could have a material adverse effect on us. We face risks including:

- a decline in the technology industry, such as a decrease in the use of mobile or web-based commerce, business layoffs or downsizing, relocation of businesses, increased costs of complying with existing or new government regulations and other factors;
- a slowdown in the growth of the Internet generally as a medium for commerce and communication;
- a downturn in the market for data center space generally, which could be caused by an oversupply of or reduced demand for data center space;
- any transition by our customers of data center storage from third-party providers like us to customer-owned and operated facilities;
- the rapid development of new technologies or the adoption of new industry standards that render our or our customers' current products and services obsolete or unmarketable and, in the case of our customers, that contribute to a downturn in their businesses, increasing the likelihood of a default under their service agreements or that they become insolvent;
- the migration from colocation data centers to the public cloud; and
- technological advancements that result in less data center space being required.

To the extent that any of these or other adverse conditions occurs, they are likely to impact market demand and pricing for our services.

Additionally, we and our customers are affected by general business and economic conditions in the United States and globally. These conditions include short-term and long-term interest rates, inflation, money supply, political issues, legislative and regulatory changes, fluctuations in both debt and equity capital markets and broad trends in industry and finance, all of which are beyond our control. Macroeconomic conditions that affect the economy and the economic outlook of the United States and the rest of the world could adversely affect our customers and vendors, which could adversely affect our results of operations and financial condition.

Any inability to manage our growth could disrupt our business and reduce our profitability.

We have experienced significant growth in recent years. Our annual revenue grew from $207.3 million in 2014 to $405.9 million in 2018. Our rapid growth has placed, and will continue to place, significant demands on our management and our administrative, operational and financial systems. Continued expansion increases the challenges we face in:

- managing a large and growing customer base;
- obtaining suitable land to build new data centers;
- establishing new operations at additional data centers and maintaining efficient use of the data center facilities we operate;
- expanding our service portfolio to cover a wider range of services;
- creating and capitalizing on economies of scale;
- obtaining additional capital to meet our future capital needs;

- recruiting, training and retaining a sufficient number of skilled technical, sales and management personnel;
- maintaining effective oversight over personnel and multiple data center locations;
- coordinating work among sites and project teams; and
- developing and improving our internal systems, particularly for managing our continually expanding business operations.

If we fail to manage the growth of our operations effectively, our businesses and prospects may be materially and adversely affected.

Our operating results may fluctuate.

We have experienced fluctuations in our results of operations on a quarterly and annual basis. The fluctuations in our operating results may cause the market price of our Class A common stock to be volatile. We may experience significant fluctuations in our operating results in the foreseeable future due to a variety of factors, including:

- the timing and magnitude of depreciation and interest expense or other expenses related to the acquisition, purchase or construction of additional data centers or the upgrade of existing data centers;
- demand for space, power and services at our data centers;
- changes in general economic conditions, such as an economic downturn, or specific market conditions in the telecommunications and internet industries, both of which may have an impact on our customer base;
- the duration of the sales cycle for our business offerings;
- the timing and logistics required for customer implementation of new programs such as our hybrid cloud solution;
- acquisitions or dispositions we may make or be a part of;
- the financial condition and credit risk of our customers;
- the provision of customer discounts and credits;
- the mix of current and proposed products and offerings and the gross margins associated with our products and offerings;
- the timing required for new and future data centers to open or become fully utilized;
- competition in the markets in which we operate;
- conditions related to international operations;
- increasing repair and maintenance expenses in connection with our data centers;
- lack of available capacity in our existing data centers to generate new revenue or delays in opening new or acquired data centers that delay our ability to generate new revenue in markets which have otherwise reached capacity;
- the timing and magnitude of other operating expenses, including taxes, expenses related to the expansion of sales, marketing, operations and acquisitions, if any, of complementary businesses and assets;
- the cost and availability of adequate public utilities, including power;
- changes in employee stock-based compensation;
- overall inflation;
- increasing interest expense due to any increases in interest rates and/or potential additional debt financings;
- changes in our tax planning strategies or failure to realize anticipated benefits from such strategies;
- changes in income tax benefit or expense; and
- changes in or new accounting principles generally accepted in the United States as periodically released by the Financial Accounting Standards Board.

Any of the foregoing factors, or other factors discussed elsewhere in this report, could have a material adverse effect on our business, results of operations and financial condition. Although we have experienced recent revenue growth, this growth rate is not necessarily indicative of future operating results. We may not be able to generate net income on a quarterly or annual basis in the future. In addition, a relatively large portion of our expenses is fixed in the short term, particularly with respect to lease and personnel expenses, depreciation and amortization and interest expenses. Therefore, our results of operations are particularly sensitive to fluctuations in revenue. As such, comparisons to prior reporting periods should not be relied upon as indications of our future performance, and our results of operations for any quarter may not be indicative of the results that may be achieved for a full fiscal year. In addition, our operating results in one or more reporting periods may fail to meet the expectations of securities analysts or investors.

The data center business is capital-intensive, and our capacity to generate capital may be insufficient to meet our anticipated capital requirements. Failure to obtain the necessary capital when needed may force us to delay, limit or terminate our expansion efforts or other operations.

The costs of constructing, developing, operating and maintaining data centers and growing our operations are substantial. While we strive to match the growth of our facilities to the demand for services, we still must spend significant amounts before we receive any revenue. Moreover, the anticipated demand may not materialize and we could be left with over-capacity. In addition, we may encounter development delays, excess development costs, or delays in developing space for our customers. Moreover, the costs of constructing, developing, operating and maintaining data centers and growing our operations may increase in the future, which may make it more difficult for us to expand our business and to operate our data centers profitably. We are required to fund the costs of constructing, developing, operating and maintaining our data centers and growing our operations with cash. We may also need to raise additional funds through equity or debt financings in the future in order to meet our operating and capital needs. Additional debt or equity financing may not be available when needed or, if available, may not be available on satisfactory terms. Our access to external sources of capital depends, in part, on general economic and financial market conditions, the market's perception of our growth potential, our then current debt level, our historical and expected future earnings, cash flow and cash distributions and the market price per share of our common stock. In addition, our ability to access additional capital may be limited by the terms of our existing indebtedness. Our inability to generate sufficient cash from operations or to obtain additional debt or equity financing may require us to prioritize projects or curtail capital expenditures and could adversely affect our results of operations. If we cannot generate sufficient capital to meet our anticipated capital requirements, our financial condition, business expansion and future prospects could be materially and adversely affected.

If we raise additional funds through further issuances of equity or equity-linked securities, our existing stockholders could suffer significant dilution in their percentage ownership of our company, and any new equity securities we issue could have rights, preferences and privileges senior to those of holders of our Class A common stock. In addition, any debt financing that we may obtain in the future could have restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions.

Our success depends on our ability to license the space in our existing data centers. The failure to license the space in our data centers may harm our growth prospects, future business, financial condition and results of operations.

Our growth depends on our ability to license the space in our existing data centers. We may not be able to attract customers for the space in our data centers for a number of reasons, including if we:

- fail to provide competitive pricing terms;
- provide space that is deemed by existing and potential customers to be inferior to those of our competitors, based on factors, including available power, preferred design features, security considerations, location and connectivity; or
- are unable to provide services that our existing and potential customers desire.

If we are unable to license available space on a timely basis or at favorable pricing terms, it could have a material adverse effect on our business, results of operations and growth prospects.

We face risks associated with having a long selling and implementation cycle for our services that requires us to make significant time and resource commitments prior to recognizing revenue for those services.

We often have a long selling cycle for our largest transactions, which can range from a few months to up to a year or more. This can require our customers and us to invest significant capital, human resources and time prior to receiving any revenue. A customer's decision to utilize our colocation services or our other services often involves

time-consuming contract negotiations and substantial due diligence on the part of the customer regarding the adequacy of our infrastructure and attractiveness of our resources and services. Macroeconomic conditions, including economic and market downturns may further impact this long sales cycle by making it difficult for customers to accurately forecast and plan future business activities. This could cause customers to slow spending or delay decision-making on our products and services, which would delay and lengthen our sales cycle. Furthermore, we may expend significant time and resources in pursuing a particular sale or customer, and we do not recognize revenue for our services until we provide the services under the terms of the applicable contract. Our efforts in pursuing a particular sale or customer may not be successful, and we may not always have sufficient capital on hand to satisfy our working capital needs between the date on which we sign an agreement with a new customer and when we first receive revenue for services delivered to the customer. If our efforts in pursuing sales and customers are unsuccessful, or our cash on hand is insufficient to cover our working capital needs over the course of our long selling cycle, our financial condition could be negatively affected.

Our outstanding indebtedness may limit our operational and financial flexibility.

As of December 31, 2018, we had total indebtedness of $586.6 million under our credit facilities (net of debt issuance costs). In addition, we maintain a $500.0 million revolving credit facility and can borrow additional amounts subject to the terms of the credit agreement. Our leveraged position could have important consequences, including:

- impairing our ability to obtain additional financing for working capital, capital expenditures, acquisitions or general corporate purposes;
- requiring us to dedicate a substantial portion of our operating cash flow to paying principal and interest on our indebtedness, thereby reducing the funds available for operations;
- limiting our ability to grow and make capital expenditures due to the financial covenants contained in our debt arrangements;
- impairing our ability to adjust rapidly to changing market conditions, invest in new or developing technologies, or take advantage of significant business opportunities that may arise;
- making us more vulnerable if a general economic downturn occurs or if our business experiences difficulties; and
- making us more vulnerable to increases in interest rates because of the variable interest rates on our borrowings.

Additionally, our credit facilities are secured by a first-priority security interest in substantially all of the assets of Switch, Ltd. and its wholly-owned material domestic subsidiaries. Our amended and restated credit agreement also contains a number of covenants that, among other things, restrict our ability to incur additional debt, incur additional liens or contingent liabilities, make investments in other persons or property, or sell or dispose of our assets.

We may not generate sufficient cash flow to meet our debt service and working capital requirements, which may expose us to the risk of default under our debt obligations.

We will need to implement our business strategy successfully on a timely basis to meet our debt service and working capital needs. We may not successfully implement our business strategy, and even if we do, we may not realize the anticipated results of our strategy and generate insufficient operating cash flow to meet our debt service obligations and working capital needs.

In the event our cash flow is inadequate to meet our debt service and working capital requirements, we may be required, to the extent permitted under our amended and restated credit agreement and any other credit facilities, to seek additional financing in the debt or equity markets, refinance or restructure all or a portion of our indebtedness, sell selected assets or reduce or delay planned capital or operating expenditures. However, any insufficient cash flow may make it more difficult for us to obtain financing on terms that are acceptable to us, or at all. We could also face substantial liquidity problems. If we are unable to generate sufficient cash flow or otherwise obtain funds needed to make required payments under our indebtedness, or if we breach any covenants under our indebtedness, we would be in default under its terms and the holders of such indebtedness may be able to accelerate the maturity of such indebtedness, which could cause defaults under our other indebtedness.

Increased power costs and limited availability of power resources may adversely affect our results of operations.

We are a large consumer of power. The cost of power accounts for a significant portion of our cost of revenue. We require power supply to provide many services we offer, such as powering and cooling our customers' servers and network equipment and operating critical data center plant and equipment infrastructure.

The amount of power our customers require may increase as they adopt new technologies, such as virtualization of hardware resources. As a result, the average amount of power used per server may increase, which in turn would increase power consumption required to cool the data center facilities. Pursuant to our service agreements, we provide our customers with a committed level of power supply availability. Historically, our energy costs have been seasonal, with increased costs primarily in the summer months that have affected our results of operations. Additionally, we have also committed to operating our data centers with 100% clean and renewable energy. While we are currently able to obtain 100% clean and renewable energy at costs that we believe are reasonable, a significant increase in the cost of clean and renewable energy or a decrease in its availability could have materially adverse consequences. These consequences could include placing us at a cost disadvantage if we are forced to increase our fees for providing, or damaging our brand and reputation if we are unable to provide, 100% clean and renewable energy. Although we aim to improve the energy efficiency of the data center facilities that we operate, there can be no assurance such data center facilities will be able to deliver sufficient power to meet the growing needs of our customers. Moreover, we may not be able to address those customers’ needs with 100% clean and renewable energy. We may lose customers or our customers may reduce the services purchased from us due to increased power costs and limited availability of power resources, including clean and renewable power resources, or we may incur costs for data center space which we cannot utilize, which would reduce our revenue and have a material and adverse effect on our cost of revenue and results of operations.

We attempt to manage our power resources and limit exposure to system downtime due to power outages from the electric grid by having redundant power feeds from the grid and by using backup generators and battery power. However, these protections may not limit our exposure to power shortages or outages entirely. Any system downtime resulting from insufficient power resources or power outages could damage our reputation and lead us to lose current and potential customers, which would harm our financial condition and results of operations.

We generate significant revenue from data centers located in one location and a significant disruption to this location could materially and adversely affect our operations.

We generate significant revenue from data centers located at The Core Campus in Las Vegas, and a significant disruption to this location could materially and adversely affect our operations. While the Pyramid Campus in Grand Rapids and The Citadel Campus near Reno opened in 2016, both locations are in development and will require additional capital investment to reach full build out and the revenue contribution from these locations is relatively small in comparison to The Core Campus in Las Vegas. Our data centers located in Las Vegas comprised 92.4% of our revenue during the year ended December 31, 2018. The occurrence of a catastrophic event, or a prolonged disruption in this region could materially and adversely affect our operations.

Any failure in the critical systems of the data center facilities we operate or services we provide could lead to disruptions in our customers’ businesses and could harm our reputation and result in financial penalty and legal liabilities, which would reduce our revenue and have a material adverse effect on our results of operation.

The critical systems of the data center facilities we operate and the services we provide are subject to failure. Any failure in the critical systems of any data center facility we operate or services that we provide, including a breakdown in critical plant, equipment or services, such as the cooling equipment, generators, backup batteries, routers, switches, or other equipment, power supplies, or network connectivity, whether or not within our control, could result in service interruptions and data losses for our customers as well as equipment damage, which could significantly disrupt the normal business operations of our customers and harm our reputation and reduce our revenue. Any failure or downtime in one of the data center facilities that we operate could affect many of our customers. The total destruction or severe impairment of any of the data center facilities we operate could result in significant downtime of our services and loss of customer data. Since our ability to attract and retain customers depends on our ability to provide highly reliable service, even minor interruptions in our service could harm our reputation and cause us to incur financial penalties. The services we provide are subject to failures resulting from numerous factors, including:

- power loss;
- equipment failure;
- human error or accidents;
- theft, sabotage and vandalism;
- failure by us or our suppliers to provide adequate service or maintenance to our equipment;
- network connectivity downtime and fiber cuts;
- security breaches to our infrastructure;

- improper building maintenance by us;
- physical, electronic and cyber security breaches;
- fire, earthquake, hurricane, tornado, flood and other natural disasters;
- extreme temperatures;
- water damage;
- public health emergencies; and
- terrorism.

We provide service level commitments to our customers. As a result, service interruptions or equipment failures in our data centers could result in credits to these customers. We cannot provide assurances that our customers will accept these credits as compensation for service interruptions and equipment failures. Service interruptions and equipment failures may also damage our brand image and reputation. Significant or frequent service interruptions could reduce the confidence of our customers and cause our customers to terminate or not renew their licenses. In addition, we may be unable to attract new customers if we have a reputation for significant or frequent service disruptions or equipment failures in our data centers.

Moreover, service interruptions and equipment failures may expose us to legal liability. As our services are critical to many of our customers' business operations, any disruption in our services could result in lost profits or other indirect or consequential damages to our customers. Although our customer contracts typically contain provisions that limit our liability for breach of the agreement, including failing to meet our service level commitments, there can be no assurance that a court would enforce any contractual limitations on our liability in the event that a customer brings a lawsuit against us as the result of a service interruption that it may ascribe to us. The outcome of any such lawsuit would depend on the specific facts of the case and any legal and policy considerations that we may not be able to mitigate. In such cases, we could be liable for substantial damage award which may have a material adverse effect on our revenue.

Delays in the expansion of existing data centers or the construction of new data centers could involve significant risks to our business.

In order to meet customer demand and the continued growth of our business, we need to expand existing data centers or obtain suitable land to build new data centers. Expansion of existing data centers and construction of new data centers are currently underway or being contemplated, and such expansion and construction requires us to carefully select and rely on the experience of one or more designers, general contractors and subcontractors during the design and construction process. If a designer or contractor experiences financial or other problems during the design or construction process, we could experience significant delays and incur increased costs to complete the projects, resulting in negative impacts on our results of operations.

In addition, we need to work closely with the local power suppliers, and sometimes local governments, where we propose to locate our data centers. Delays in actions that require the assistance of such third parties, or delays in receiving required permits and approvals from such parties, may also affect the speed with which we complete data center projects or result in their not being completed at all. We have experienced such delays in receiving approvals and permits or in actions to be taken by third parties in the past and may experience them again in the future.

If we experience significant delays due to weather or supply of power required to support the data center expansion or new construction, either during the design or construction phases, the progress of the data center expansion and construction could deviate from our original plans, which could cause material and negative effects to our revenue growth, profitability and results of operations.

We are continuing to invest in our expansion efforts but may not have sufficient customer demand in the future to realize expected returns on these investments.

We expect to continue to expand our data center footprint. In connection with our expansion plans, we may be required to commit significant operational and financial resources, but there can be no guarantee we will have sufficient customer demand in those markets to support data centers once built. This risk may be greater in a market where we have not operated previously. Once development of a data center facility is complete, we incur certain operating expenses even if there are no customers occupying any space. Consequently, if any of our properties have significant vacancies for an extended period of time, our results of operations and business and financial condition will be affected adversely, the impact of which could be material. In addition, unanticipated technological changes could affect customer requirements for data centers, and we may not have built such requirements into our new data centers. If any of these developments or contingencies were to occur, it could make it difficult for us to realize expected or reasonable returns on our investments.

If we fail to protect our proprietary intellectual property rights adequately, our competitive position could be impaired, and we may lose valuable assets, generate reduced revenue and incur costly litigation to protect our rights.

Our success depends, in part, on our ability to protect our proprietary intellectual property rights, including certain methodologies, practices, tools, technologies and technical expertise we use in designing, developing, implementing and maintaining applications and processes used in providing our services. We rely on a combination of patent, trademark, trade secrets and other intellectual property laws, non-disclosure agreements with our employees, consultants, customers and other relevant persons, and other measures to protect our intellectual property, including our brand identity. However, the steps we take to protect our intellectual property may be inadequate, and we may choose not to pursue or maintain protection for our intellectual property in the United States or foreign jurisdictions. We will not be able to protect our intellectual property if we are unable to enforce our rights or if we do not detect unauthorized use of our intellectual property. Despite our precautions, it may be possible for unauthorized third parties to copy our technology and use information that we regard as proprietary to create technology that competes with ours. In addition, the laws of some countries do not protect proprietary rights to the same extent as the laws of the United States, and mechanisms for enforcement of intellectual property rights in some foreign countries may be inadequate. To the extent we expand our international activities, our exposure to unauthorized copying and use of our technologies and proprietary information may increase. Accordingly, despite our efforts, we may be unable to prevent third parties from infringing upon or misappropriating our technology and intellectual property.

We rely in part on trade secrets, proprietary know-how and other confidential information to maintain our competitive position. Although we enter into non-disclosure and invention assignment agreements with our employees, enter into non-disclosure agreements with our customers, consultants and other parties with whom we have strategic relationships and business alliances and enter into intellectual property assignment agreements with our consultants and vendors, no assurance can be given that these agreements will be effective in controlling access to and distribution of our technology and proprietary information. In addition, these agreements do not prevent our competitors from independently developing technologies that are substantially equivalent or superior to our products.

To protect our intellectual property rights, we may be required to spend significant resources to monitor and protect these rights. Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets. Such litigation could be costly, time consuming and distracting to management and could result in the impairment or loss of portions of our intellectual property. Furthermore, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims and countersuits attacking the validity and enforceability of our intellectual property rights. Our inability to protect our proprietary technology, as well as any costly litigation or diversion of our management's attention and resources, could disrupt our business, as well as have a material adverse effect on our financial condition and results of operations.

We may in the future be subject to intellectual property disputes, which are costly to defend and could harm our business and operating results.

We may from time to time face allegations that we have infringed the patents, copyrights, trademarks and other intellectual property rights of third parties, including from our competitors. We may be unaware of the intellectual property rights that others may claim cover some or all of our technology or services. Patent and other intellectual property litigation may be protracted and expensive, and the results are difficult to predict and may require us to stop using certain technologies or offering certain services or may result in significant damage awards or settlement costs.

Even if these matters do not result in litigation or are resolved in our favor or without significant cash settlements, these matters, and the time and resources necessary to litigate or resolve them, could divert the time and resources of our management team and harm our business, our operating results and our reputation.

We rely on the proper and efficient functioning of computer and data-processing systems, and a large-scale malfunction could have a material adverse effect on us.

Our ability to keep our data centers operating depends on the proper and efficient functioning of computer and data-processing systems. Since computer and data-processing systems are susceptible to malfunctions and interruptions, including those due to equipment damage, power outages, computer viruses and a range of other hardware, software and network problems, we cannot guarantee that our data centers will not experience such malfunctions or interruptions in the future. Additionally, expansions and developments in the products and services that we offer could increasingly add a measure of complexity that may overburden our data center and network resources and human capital, making service interruptions and failures more likely. A significant or large-scale malfunction or interruption of one or more of any of our data centers' computer or data-processing systems could

adversely affect our ability to keep such data centers running efficiently. If a malfunction results in a wider or sustained disruption to business at a property, it could have a material adverse effect on us.

We may be vulnerable to security breaches, including cyber security breaches, which could disrupt our operations and have a material adverse effect on our financial condition and results of operations.

We face risks associated with unauthorized access to our computer systems, loss or destruction of data, computer viruses, malware, distributed denial-of-service attacks, or other malicious activities. These threats may result from human error, equipment failure, or fraud or malice on the part of employees or third parties. A party who is able to compromise the security measures on our networks, or the systems of our third-party service providers, could misappropriate either our proprietary information or the personal information of our customers or our employees, or cause interruptions or malfunctions in our operations or our customers' operations. Additionally, we provide the infrastructure and physical security for our customers' IT equipment, which often contains highly confidential and mission critical data. A party who is able to compromise the physical security measures protecting our data center facilities could misappropriate our or our customers' proprietary information or cause interruptions or malfunctions in our operations. As we provide assurances to our customers that we provide the highest level of security, such a compromise could be particularly harmful to our brand and reputation. We may be required to expend significant capital and resources to protect against such threats or to alleviate problems caused by breaches in security. As techniques used to breach security change frequently and are often not recognized until launched against a target, we may not be able to implement new security measures in a timely manner or, if and when implemented, we may not be certain whether these measures could be circumvented. Any breaches that may occur could expose us to increased risk of lawsuits, regulatory penalties, loss of existing or potential customers, harm to our reputation and increases in our security costs, which could have a material adverse effect on our financial condition and results of operations.

In addition, any assertions of alleged security breaches or systems failure made against us, whether true or not, could harm our reputation, cause us to incur substantial legal fees and have a material adverse effect on our business, reputation, financial condition and results of operations. Whether or not any such assertion actually proceeds to litigation, we may be required to devote significant management time and attention to its resolution (through litigation, settlement or otherwise), which would detract from our management's ability to focus on our business. Any such resolution could involve the payment of damages or expenses by us, which may be significant. In addition, any such resolution could involve our agreement with terms that restrict the operation of our business.

A significant portion of our revenue is highly dependent on a limited number of customers, and the loss of, or any significant decrease in business from, these customers could adversely affect our financial condition and results of operations.

Our top 10 customers accounted for approximately 36.3% of our revenue for the year ended December 31, 2018.

A number of factors could cause us to lose customers. For instance, because many of our contracts involve services that are mission-critical to our customers, any failure by us to meet a customer's expectations could result in cancellation or non-renewal of the contract. Our service agreements usually allow our customers to terminate their agreements with us before the end of the contract period under certain specified circumstances, including our failure to deliver services as required under such agreements, and in some cases without cause as long as sufficient notice is given. In addition, our customers may decide to reduce spending on our services or demand price reductions due to a challenging economic environment or other factors, both internal and external, relating to their business such as corporate restructuring or changing their outsourcing strategy by moving more facilities in-house or outsourcing to other service providers. In addition, our reliance on any individual customer for a significant portion of our revenue may give that customer a degree of pricing leverage against us when negotiating contracts and terms of services with us.

The loss of any of our major customers, or a significant decrease in the extent of the services that they outsource to us or the price at which we sell our services to them, could materially and adversely affect our financial condition and results of operations.

Additionally, if any customer becomes a debtor in a case under the U.S. Bankruptcy Code, applicable bankruptcy laws may limit our ability to terminate our contract with such customer solely because of the bankruptcy or recover any amounts owed to us under our agreements with such customer. In addition, applicable bankruptcy laws could allow the customer to reject and terminate its agreement with us, with limited ability for us to collect the full amount of our damages. Our business could be adversely affected if any of our significant customers were to become bankrupt or insolvent.

Our customer contract commitments are subject to reduction and potential cancellation.

Some of our customer contracts allow for early termination, subject to payment of specified costs and penalties, which may be less than the revenue we would expect to receive under such contracts. Our customer contract commitments could significantly decrease if any of the customer contracts are terminated either pursuant to, or in violation of, the terms of such contract. In addition, our customer contract commitments during a particular future period may be reduced for reasons outside of our customers' control, such as general current economic conditions. If our customer contract commitments are significantly reduced, our results of operations and the price of our Class A common stock could be materially and adversely affected.

Even if our current and future customers have entered into a binding contract with us, they may choose to terminate such contract prior to the expiration of its terms. Any penalty for early termination may not adequately compensate us for the time and resources we have expended in connection with such contract, or at all, which could have a material adverse effect on our results of operations and cash flows.

Our customer base may decline if our customers or potential customers develop their own data centers or expand their own existing data centers.

Some of our customers have in the past, and may in the future, develop their own data center facilities. Other customers with their own existing data centers may choose to expand their data center operations in the future. One of our business strategies is to sell or lease our single-user data centers. In the event that any of our key customers were to develop or expand their own data centers, we may lose business, fail to execute on our strategy of our single-user data centers or face pressure as to the pricing of our services. In addition, if we fail to offer services that are cost-competitive and operationally advantageous as compared with services provided in-house by our customers, we may lose customers or fail to attract new customers. If we lose a customer, there is no assurance that we would be able to replace that customer at the same or a higher rate, or at all, and our business and results of operations would suffer.

Our churn rate may increase or we may be unable to achieve high contract renewal rates.

We seek to renew customer contracts when those contracts are due for renewal. We endeavor to provide high levels of customer service, support and satisfaction to maintain long-term customer relationships and to secure high rates of contract renewals for our services. Nevertheless, we may not be able to renew service contracts with our existing customers or re-commit space relating to expired service contracts to new customers if our current customers do not renew their contracts. In the event of a customer's termination or non-renewal of expired contracts, our ability to enter into service contracts so that new or other existing customers utilize the expired existing space in a timely manner will affect our results of operations.

If we do not succeed in attracting new customers for our services and growing revenue from existing customers, we may not achieve our anticipated revenue growth.

Our ability to attract new customers and grow revenue from existing customers depends on a number of factors, including our ability to offer high quality services at competitive prices, the strength of our competitors and the capabilities of our marketing and sales teams to attract new customers. If we fail to attract new customers or grow revenue from existing customers, we may not be able to grow our revenue as quickly as we anticipate or at all.

The migration from colocation data centers to the public cloud may have a material adverse effect on our results of operations.

In response to rapidly growing demand for public cloud solutions, we have introduced a hybrid cloud ecosystem service with the anticipation of a continuously strong demand for colocation data centers. If our assumptions prove to be incorrect, the migration from colocation data centers to the public cloud could harm our financial condition and results of operations.

Unanticipated changes in the tax rates and policies of the states in which we operate could materially and adversely affect our results of operations.

We strategically choose the locations of our U.S. campuses. One of the factors we consider is the favorable tax rates and policies that provide zero or low-tax environments for our customers to deploy IT equipment. If the tax rates and policies of the states in which our data centers are located expose our customers to higher taxes, our data centers may become less attractive to certain of our existing and potential customers, which could materially and adversely affect our results of operations.

The loss of one or more of our key personnel, or our failure to attract and retain other highly qualified personnel in the future, could seriously harm our business.

We depend to a significant degree on the continuous service and performance of Rob Roy, our Founder, Chairman and Chief Executive Officer, and our experienced senior management team and other key personnel, any of whom could resign or be terminated for any reason at any time. Mr. Roy has been responsible for our company's strategic vision and the development of our technology and business. If he stopped working for us for any reason, it is unlikely that we would be able to find a suitable replacement immediately. The loss of Mr. Roy, a member of our senior management team or any other key employee could disrupt our business operations and create uncertainty as we search for and integrate a replacement. If any member of our senior management or key employee leaves us to join a competitor or to form a competing company, any resulting loss of existing or potential customers to any such competitor could have a material adverse effect on our business, financial condition and results of operations. In addition, we do not maintain key man life insurance for any of the senior members of our management team or our key personnel.

Future consolidation and competition in our customers' industries could reduce the number of our existing and potential customers and make us dependent on a more limited number of customers.

Mergers or consolidations in our customers' industries in the future could reduce the number of our existing and potential customers and make us dependent on a more limited number of customers. If our customers merge with or are acquired by other entities that are not our customers, they may discontinue or reduce the use of our data centers in the future. Additionally, some of our customers may compete with one another in various aspects of their businesses, which places additional competitive pressures on our customers. Any of these developments could have a material adverse effect on us.

We may not be able to compete effectively against our current and future competitors.

We offer a broad range of data center services and, as a result, we may compete with a wide range of data center service providers for some or all of the services we offer. We face competition from numerous developers, owners and operators in the data center industry, including cloud and managed service providers and REITs, some of which own or lease properties similar to ours, or may do so in the future, in the same submarkets in which our properties are located. In 2018, we introduced our new hybrid cloud solution to our existing customers, however, these customers may choose other cloud offerings and move workloads to cloud providers, which may reduce the services our customers obtain from us. Our current and future competitors may vary by size and service offerings and geographic presence. In addition, many data center companies are consolidating to create new companies with greater market power.

Competition is primarily centered on reputation and track record, quality and availability of data center space, quality of service, technical expertise, security, reliability, functionality, breadth and depth of services offered, geographic coverage, scale, financial strength and price. Some of our current and future competitors may have greater brand recognition, longer operating histories, stronger marketing, technical and financial resources and access to greater and less expensive power than we do. In addition, many companies in the industry are consolidating, which could further increase the market power of our competitors. As a result, some of our competitors may be able to:

- offer space at pricing below current market rates or below the pricing we currently charge our customers;
- bundle colocation services with other services or equipment they provide at reduced prices;
- develop superior products or services, gain greater market acceptance and expand their service offerings more efficiently or rapidly;
- adapt to new or emerging technologies and changes in customer requirements more quickly;
- take advantage of acquisition and other opportunities more readily; and
- adopt more aggressive pricing policies and devote greater resources to the promotion, marketing and sales of their services.

We operate in a competitive market, and we face pricing pressure for our services. Prices for our services are affected by a variety of factors, including supply and demand conditions and pricing pressures from our competitors. We may be required to lower our prices to remain competitive, which may decrease our margins and adversely affect our business prospects, financial condition and results of operations.

We have government customers, which subjects us to risks including early termination, audits, investigations, sanctions and penalties.

We derive some revenue from contracts with U.S., state and local governments. Some of these customers may terminate all or part of their contracts at any time, without cause. There is increased pressure for governments and their agencies to reduce spending. Some of our contracts at the state and local levels are subject to government funding authorizations, which may be adversely affected by a U.S. federal government shut-down or budget sequestration.

Additionally, government contracts are generally subject to audits and investigations that could result in various civil and criminal penalties and administrative sanctions, including termination of contracts, refund of a portion of fees received, forfeiture of profits, suspension of payments, fines and suspensions or debarment from future government business.

If we are unable to adapt to evolving technologies and customer demands in a timely and cost-effective manner, our ability to sustain and grow our business may suffer.

The markets for the data centers we own and operate, as well as certain of the industries in which our customers operate, are characterized by rapidly changing technology, evolving industry standards, frequent new service introductions, shifting distribution channels and changing customer demands. As a result, our data center infrastructure may become less marketable due to demand for new processes and technologies, including, without limitation: (i) new processes to deliver power to, or eliminate heat from, IT equipment; (ii) customer demand for additional redundancy capacity; (iii) new technology that permits higher levels of critical load and heat removal than our data centers are currently designed to provide; and (iv) an inability of the power supply to support new, updated or upgraded technology. In addition, the systems that connect our data centers to the Internet and other external networks may become insufficient, including with respect to latency, reliability and diversity of connectivity. We may not be able to adapt to changing technologies or meet customer demands for new processes or technologies in a timely and cost-effective manner, if at all, which would adversely impact our ability to sustain and grow our business.

In addition, new technologies have the potential to replace or provide lower cost alternatives to our services. The adoption of such new technologies could render some or all of our services obsolete or unmarketable. We cannot guarantee that we will be able to identify the emergence of all of these new service alternatives successfully, modify our services accordingly, or develop and bring new services to market in a timely and cost-effective manner to address these changes. If and when we do identify the emergence of new service alternatives and introduce new services to market, those new services may need to be made available at lower profit margins than our then-current services. Failure to provide services to compete with new technologies or the obsolescence of our services could lead us to lose current and potential customers or could cause us to incur substantial costs, which would harm our operating results and financial condition. Our introduction of new alternative services that have lower price points than our current offerings may also result in our existing customers switching to the lower cost products, which could reduce our revenue and have a material adverse effect on our results of operation.

Potential future regulations that apply to industries we serve may require customers in those industries to seek specific requirements from their data centers that we are unable to provide. These may include physical security requirements applicable to the defense industry and government contractors and privacy and security regulations applicable to the financial services and health care industries. If such regulations were adopted or such extra requirements demanded by certain customers, we could lose some customers or be unable to attract new customers in certain industries, which would have a material and adverse effect on our operations.

We depend on third parties to provide Internet, telecommunication and fiber optic network connectivity to our customers, and any delays or disruptions in service could have a material adverse effect on us.

Our products and infrastructure rely on third-party service providers. In particular, we depend on third parties to provide Internet, telecommunication and fiber optic network connectivity to the customers in our data centers, and we have no control over the reliability of the services provided by these suppliers. Our customers may in the future experience difficulties due to service failures unrelated to our systems and services. Any Internet, telecommunication or fiber optic network failures may result in significant loss of connectivity to our data centers. A significant loss of connectivity to our data centers could reduce the confidence of our customers and impair our ability to retain existing customers or attract new customers, which could have a material adverse effect on us.

Similarly, we depend upon the presence of Internet, telecommunications and fiber optic networks serving the locations of our data centers in order to attract and retain customers. The construction required to connect multiple carrier facilities to our data centers is complex, requiring a sophisticated redundant fiber network, and involves matters outside of our control, including regulatory requirements and the availability of construction resources. Each new data center that we develop requires significant amounts of capital for the construction and operation of a

sophisticated redundant fiber network. We believe that the availability of carrier capacity affects our business and future growth. We cannot guarantee that any carrier will elect to offer its services within our data centers or that once a carrier has decided to provide connectivity to our data centers that it will continue to do so for any period of time. Furthermore, some carriers are experiencing business difficulties or have announced consolidations or mergers. As a result, some carriers may be forced to downsize or terminate connectivity within our data centers, which could adversely affect our customers and could have a material adverse effect on us.

The occurrence of a catastrophic event or a prolonged disruption may exceed our insurance coverage by significant amounts.

Our operations are subject to hazards and risks normally associated with the daily operations of our data center facilities. Currently, we maintain various insurance policies for business interruption for lost profits, property and casualty, public liability, commercial employee insurance, worker's compensation, personal property and auto liability. Our business interruption insurance for lost profits includes coverage for business interruptions, our property and casualty insurance includes coverage for equipment breakdowns and our commercial employee insurance includes employee group insurance. We are self-insured for medical insurance. We believe our insurance coverage adequately covers the risks of our daily business operations. However, our current insurance policies may be insufficient in the event of a prolonged or catastrophic event. The occurrence of any such event that is not entirely covered by our insurance policies may result in interruption of our operations and subject us to significant losses or liabilities and damage our reputation as a provider of business continuity services. In addition, any losses or liabilities that are not covered by our current insurance policies may have a material adverse effect on our business, financial condition and results of operations.

Environmental problems are possible and can be costly.

Environmental liabilities could arise on the land that we own or lease and have a material adverse effect on our financial condition and performance. Federal, state and local laws and regulations relating to the protection of the environment may require a current or previous owner or operator of real estate to investigate and remediate hazardous or toxic substances or petroleum product releases at or from the property. In addition, we could incur costs to comply with such laws and regulations, the violation of which could lead to substantial fines and penalties.

We may have to pay governmental entities or third parties for property damage and for investigation and remediation costs that they incurred in connection with any contamination at our current and former properties without regard to whether we knew of or caused the presence of the contaminants. Even if more than one person may have been responsible for the contamination, each person covered by these environmental laws may be held responsible for all of the clean-up costs incurred.

Some of the properties may contain asbestos-containing building materials. Environmental laws require that asbestos-containing building materials be properly managed and maintained, and may impose fines and penalties on building owners or operators for failure to comply with these requirements.

Our leases for self-developed data centers could be terminated early and we may not be able to renew our existing leases and agreements on commercially acceptable terms or our rent or payment under the agreements could increase substantially in the future, which could materially and adversely affect our operations.

Two of our facilities and one of our facilities under development are located on properties for which we have long term operating and capital leases. In some instances, we may elect to exercise an option to purchase the leased premises and facilities, or in other instances, elect to extend the term of certain leases, in each case, according to the terms and conditions under the relevant lease agreements. However, upon the expiration of such leases (including any extension terms), we may not be able to renew these leases on commercially reasonable terms, if at all. Even though the lessors for most of our data centers generally do not have the right of unilateral early termination unless they provide the required notice and opportunity to cure (as applicable), the lease may nonetheless be terminated early if we are in material breach of the lease agreements. We may assert claims for compensation against the landlords if they elect to terminate a lease agreement early and without due cause. If the leases for our data centers were terminated early prior to their expiration date, notwithstanding any compensation we may receive for early termination of such leases, or if we are not able to renew such leases, we may have to incur significant cost related to relocation. Our leased facilities are located in properties that are subject to master ground leases. If the landlords under such master ground leases elect to terminate the respective master leases in case of default or breach by the master lessees thereunder or otherwise pursuant to the terms and conditions of the relevant master lease, we may not be able to protect our leasehold interest, and may be ordered to vacate the affected premises. Any relocation could also affect our ability to provide continuous uninterrupted services to our customers and harm our reputation. As a result, our business and results of operations could be materially and adversely affected.

Any difficulties in identifying and consummating future acquisitions, alliances or joint ventures may expose us to potential risks and have an adverse effect on our business, results of operations or financial condition.

We may seek to make strategic acquisitions and enter into alliances and joint ventures to further expand our business. If we are presented with appropriate opportunities, we may acquire additional businesses, services, resources, or assets, including data centers that are complementary to our primary business. Our integration of the acquired entities or assets into our business may not be successful and may not enable us to expand into new services, customer segments or operating locations as well as we expect. This would significantly affect the expected benefits of these acquisitions. Moreover, the integration of any acquired entities or assets into our operations could require significant attention from our management. The diversion of our management's attention and any difficulties encountered in any integration process could have an adverse effect on our ability to manage our business. In addition, we may face challenges trying to integrate new operations, services and personnel with our existing operations. Our possible future acquisitions may also expose us to other potential risks, including risks associated with unforeseen or hidden liabilities, the diversion of resources from our existing businesses and technologies, our inability to generate sufficient revenue to offset the costs, expenses of acquisitions and potential loss of, or harm to, relationships with employees and customers as a result of our integration of new businesses. The occurrence of any of these events could have a material and adverse effect on our ability to manage our business, our financial condition and our results of operations.

If our or our customers' proprietary intellectual property or confidential information is misappropriated or disclosed by us or our employees in violation of applicable laws and contractual agreements, we could be exposed to protracted and costly legal proceedings, lose customers and our business could be seriously harmed.

Our employees could disclose or use our technical knowledge, practices or procedures without authorization. We have entered into confidentiality agreements with our employees that contain nondisclosure covenants that survive indefinitely as to our trade secrets. Pursuant to these confidentiality agreements, our employees are required to assign any of their inventions that are developed or reduced to practice during their employment with us that pertain to any of our lines of business activity, that are aided by the use of our time, materials or facilities, or that relate to any of their work with us. However, we may not be able to enforce the confidentiality agreements we have with our personnel.

Additionally, our customers occasionally provide us and our employees access to proprietary intellectual property and confidential information, including technology, software products, business policies and plans, trade secrets and personal data. Many of our customer contracts require us not to use or disclose such intellectual property or information and to indemnify our customers for any loss they may suffer as a result of any unauthorized use or disclosure. We use security technologies and other methods to prevent employees from making unauthorized copies, or using or disclosing such intellectual property and confidential information without authorization. The confidentiality agreements we enter into with our employees limit access to and distribution of our customers' intellectual property and other confidential information as well as our own. However, these steps may not be adequate to safeguard our and our customers' intellectual property and confidential information. Moreover, some of our customer contracts do not include any limitation on our liability with respect to breaches of our obligation to keep the intellectual property or confidential information we receive from them confidential. In addition, we may not always be aware of intellectual property registrations or applications relating to source codes, software products or other intellectual property belonging to our customers. As a result, if we or our employees misappropriate our customers' proprietary rights, our customers may consider us liable for such act and seek damages and compensation from us.

Assertions of infringement of intellectual property or misappropriation of confidential information against us, if successful, could have a material adverse effect on our business, financial condition and results of operations. Protracted litigation could also result in existing or potential customers deferring or limiting their purchase or use of our services until resolution of such litigation. Even if such assertions against us are unsuccessful, they may cause us to lose existing and future business and incur reputational harm and substantial legal fees.

Competition for employees is intense, and we may not be able to attract and retain the qualified and skilled employees needed to support our business.

We believe our success depends on the efforts and talent of our employees, including data center design, construction management, operations, engineering, IT, risk management, and sales and marketing personnel. Our future success depends on our continued ability to attract, develop, motivate and retain qualified and skilled employees. Competition for highly skilled personnel is frequently intense. We may not be able to hire and retain these personnel at compensation levels consistent with our existing compensation and salary structure. Some of

the companies with which we compete for experienced employees have greater resources than we have and may be able to offer more attractive terms of employment.

In addition, we invest significant time and expenses in training our employees, which increases their value to competitors who may seek to recruit them. If we fail to retain our employees, we could incur significant expenses in hiring and training their replacements, and the quality of our services and our ability to serve our customers could diminish, resulting in a material adverse effect to our business.

We have entered, and expect to continue to enter, into joint venture, strategic collaborations and other similar arrangements, and these activities involve risks and uncertainties. A failure of any such relationship could have a material adverse effect on our business and results of operations.

We have entered, and expect to continue to enter, into joint venture, strategic collaborations and other similar arrangements. These activities involve risks and uncertainties, including the risk of the joint venture or applicable entity failing to satisfy its obligations, which may result in certain liabilities to us for guarantees and other commitments, the challenges in achieving strategic objectives and expected benefits of the business arrangement, the risk of conflicts arising between us and our partners and the difficulty of managing and resolving such conflicts, and the difficulty of managing or otherwise monitoring such business arrangements. A failure of our business relationships could have a material adverse effect on our business and results of operations.

Uncertain economic environment may have an adverse impact on our business and financial condition.

Uncertain economic environment may have an adverse effect on our liquidity. While we believe we have a strong customer base, if market conditions change, some of our customers may have difficulty paying us and we may experience losses in our customer base and reductions in their commitments to us. We may also be required to make allowances for doubtful accounts and our results would be negatively impacted. Our sales cycle could also be lengthened if customers reduce spending on, or delay decision-making with respect to, our services, which could adversely affect our revenue growth and our ability to recognize revenue. We could also experience pricing pressure as a result of economic conditions if our competitors lower prices and attempt to lure away our customers with lower cost solutions. Finally, our ability to access the capital markets may be severely restricted at a time when we would like, or need, to do so, which could have an impact on our flexibility to pursue additional expansion opportunities and maintain our desired level of revenue growth in the future.

Our current international operations through our joint venture, or future international operations, may expose us to certain operating, legal and other risks, which could adversely affect our business, results of operations and financial condition.

Our joint venture's international operations, or any future international operations, may expose us to risks that we have not generally faced in the United States. These risks include:

- challenges caused by distance, language, cultural and ethical differences and the competitive environment;
- heightened risks of unethical, unfair or corrupt business practices, actual or claimed, in certain geographies and of improper or fraudulent sales arrangements that may impact financial results and result in restatements of, and irregularities in, financial statements;
- foreign exchange restrictions and fluctuations in currency exchange rates, including as a result of the United Kingdom's June 2016 vote to leave the European Union (commonly known as Brexit);
- application of multiple and conflicting laws and regulations, including complications due to unexpected changes in foreign laws and regulatory requirements;
- new and different sources of competition;
- different pricing environments, longer sales cycles and longer accounts receivable payment cycles and collections issues;
- management communication and integration problems resulting from cultural differences and geographic dispersion;
- adverse tax consequences, including multiple and possibly overlapping tax structures, the complexities of foreign value-added tax systems, restrictions on the repatriation of earnings and changes in tax rates;
- greater difficulty in enforcing contracts, accounts receivable collection and longer collection periods;
- the uncertainty and limitation of protection for intellectual property rights in some countries;

- increased financial accounting and reporting burdens and complexities;
- lack of familiarity with local laws, customs and practices, and laws and business practices favoring local competitors or partners; and
- political, social and economic instability abroad, terrorist attacks and security concerns in general.

The occurrence of any one of these risks could harm our international business and, consequently, our results of operations. Additionally, operating in international markets requires significant management attention and financial resources. We cannot be certain that the investment and additional resources required to operate in other countries will produce desired levels of revenue or profitability.

In addition, our agreement with our international joint venture partner limits our ability to engage in activities or transactions outside of the United States. Although we expressly retain the right to construct and license third parties to construct single-user data centers outside of the United States, we are required to grant our joint venture the reasonable opportunity to interact and reach an agreement with such customer to develop a colocation facility prior to concluding our agreement with such third party. Furthermore, in the event any such single-user data center outside the United States using our technology is made available to third parties as colocation space, such data center will be deemed a facility subject to our license agreement. We would then be required to make appropriate arrangements to acknowledge SUPERNAP International, S.A.'s license rights in, and to, the technology for the multitenant data center. These limitations may prevent us from pursuing otherwise attractive and potentially lucrative international expansion opportunities.

Future legislation and regulation, both domestic and international could have an adverse effect on our business operations.

Various laws and governmental regulations, both in the United States and international, governing internet related services, related communications services and information technologies remain largely unsettled, even in areas where there has been some legislative action. For example, the Federal Communications Commission, or the FCC, recently overturned network neutrality rules, which may result in material changes in the regulations and contribution regime affecting us and our customers. Furthermore, the U.S. Congress and state legislatures are reviewing and considering changes to the new FCC rules making the future of network neutrality and its impact on us uncertain. There may also be forthcoming regulation in the United States in the areas of cybersecurity, data privacy and data security, any of which could affect us and our customers. Similarly, data privacy regulations outside of the United States continue to evolve. Future legislation could impose additional costs on our business or require us to make changes in our operations, which could adversely affect our operations.

We may incur significant costs complying with other regulations.

Our properties are subject to various federal, state and local regulations, such as state and local fire and safety regulations. If one of our properties is not in compliance with these various regulations, we may be required to pay fines or private damage awards. We do not know whether existing regulations will change or whether future regulations will require us to make significant unanticipated expenditures that may adversely affect our business, financial condition and results of operations.

Our facilities may not be suitable for uses other than as data centers, which could make it difficult to sell or reposition them and could materially adversely affect our business, results of operations and financial condition.

Our data centers are designed primarily to house and run IT equipment and, therefore, contain extensive electrical and mechanical systems and infrastructure. As a result, our facilities may not be suitable for uses other than as data centers, or may require major renovations and expenditures before they can be re-leased or sold for uses other than as data centers.

Risks Related to Our Organizational Structure

Our principal asset is our interest in Switch, Ltd., and, accordingly, we depend on distributions from Switch, Ltd. to pay our taxes and expenses, including payments under the Tax Receivable Agreement. Switch, Ltd.'s ability to make such distributions may be subject to various limitations and restrictions.

We are a holding company and have no material assets other than our ownership of Common Units. We have no independent means of generating revenue or cash flow. We have determined that Switch, Ltd. is a variable interest entity, or VIE, and that we are the primary beneficiary of Switch, Ltd. Accordingly, pursuant to the VIE accounting model, we have consolidated Switch, Ltd. in our consolidated financial statements. In the event of a change in accounting guidance or amendments to the Switch Operating Agreement resulting in us no longer having a controlling interest in Switch, Ltd., we may not be able to consolidate its results of operations with our own, which

would have a material adverse effect on our results of operations. Moreover, our ability to pay our taxes and operating expenses or declare and pay dividends in the future, if any, is dependent upon the financial results and cash flows of Switch, Ltd. and its subsidiaries and distributions we receive from Switch, Ltd. There can be no assurance that Switch, Ltd. and its subsidiaries will generate sufficient cash flow to distribute funds to us or that applicable state law and contractual restrictions, including negative covenants in our debt instruments, will permit such distributions.

Switch, Ltd. is treated as a partnership for U.S. federal income tax purposes and, as such, is not subject to any entity-level U.S. federal income tax. Instead, taxable income is allocated to holders of Common Units, including us. Accordingly, we incur income taxes on our allocable share of any net taxable income of Switch, Ltd. Under the terms of the Switch Operating Agreement, Switch, Ltd. is obligated to make tax distributions to holders of Common Units, including us. In addition to tax expenses, we will also incur expenses related to our operations, including payments under the Tax Receivable Agreement, which we expect could be significant. As the manager of Switch, Ltd., we intend to cause Switch, Ltd. to make cash distributions to the owners of Common Units in an amount sufficient to (i) fund their tax obligations in respect of taxable income allocated to them and (ii) cover our operating expenses, including payments under the Tax Receivable Agreement. However, Switch, Ltd.'s ability to make such distributions may be subject to various limitations and restrictions, such as restrictions on distributions that would either violate any contract or agreement to which Switch, Ltd. is then a party, including debt agreements, or any applicable law, or that would have the effect of rendering Switch, Ltd. insolvent. If we do not have sufficient funds to pay tax or other liabilities or to fund our operations, we may have to borrow funds, which could materially adversely affect our liquidity and financial condition and subject us to various restrictions imposed by any such lenders. To the extent that we are unable to make payments under the Tax Receivable Agreement for any reason, such payments generally will be deferred and will accrue interest until paid; provided, however, that nonpayment for a specified period may constitute a material breach of a material obligation under the Tax Receivable Agreement and therefore accelerate payments due under the Tax Receivable Agreement. In addition, if Switch, Ltd. does not have sufficient funds to make distributions, our ability to declare and pay cash dividends will also be restricted or impaired. See "Risks Related to Ownership of Our Class A Common Stock."

The Tax Receivable Agreement with the Members requires us to make cash payments to them in respect of certain tax benefits to which we may become entitled, and we expect that the payments we are required to make will be substantial.

Under the Tax Receivable Agreement we have entered into with Switch, Ltd. and the Members, we are required to make cash payments to the Members equal to 85% of the tax benefits, if any, that we actually realize, or in certain circumstances are deemed to realize, as a result of (i) the increases in the tax basis of assets of Switch, Ltd. resulting from any redemptions or exchanges of Common Units from the Members and (ii) certain other tax benefits related to our making payments under the Tax Receivable Agreement. Although the actual timing and amount of any payments that we make to the Members under the Tax Receivable Agreement will vary, we expect those payments will be significant. Any payments made by us to the Members under the Tax Receivable Agreement will generally reduce the amount of overall cash flow that might have otherwise been available to us. Furthermore, our future obligation to make payments under the Tax Receivable Agreement could make us a less attractive target for an acquisition, particularly in the case of an acquirer that cannot use some or all of the tax benefits that are the subject of the Tax Receivable Agreement. Payments under the Tax Receivable Agreement are not conditioned on any Member's continued ownership of Common Units or our Class A common stock.

The actual amount and timing of any payments under the Tax Receivable Agreement will vary depending upon a number of factors, including the timing of redemptions or exchanges by the holders of Common Units, the amount of gain recognized by such holders of Common Units, the amount and timing of the taxable income we generate in the future, and the federal tax rates then applicable.

Our Founder, Chief Executive Officer and Chairman has control over all stockholder decisions because he controls a substantial majority of the combined voting power of our common stock. This limits or precludes a stockholders' ability to influence corporate matters, including the election of directors, amendments of our organizational documents and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval.

As of March 1, 2019, Rob Roy, our Founder, Chief Executive Officer and Chairman, and an affiliated entity of Mr. Roy collectively controlled approximately 67.9% of the combined voting power of our common stock as a result of their ownership of our Class C common stock, each share of which is entitled to 10 votes on all matters submitted to a vote of our stockholders, and Mr. Roy's ownership of Class A common stock.

As a result, Mr. Roy has the ability to substantially control us, including the ability to control any action requiring the general approval of our stockholders, such as the election of our board of directors, the adoption of amendments to

our articles of incorporation and bylaws and the approval of any merger or sale of substantially all of our assets. This concentration of ownership and voting power may also delay, defer or even prevent an acquisition by a third party or other change of control of us and may make some transactions more difficult or impossible without his support, even if such events are in the best interests of minority stockholders. This concentration of voting power with Mr. Roy may have a negative impact on the price of our Class A common stock. In addition, because shares of our Class C common stock have 10 votes per share on matters submitted to a vote of our stockholders for so long as Mr. Roy beneficially owns at least 21,472,324 shares of Class C common stock, we expect that Mr. Roy will be able to control our company for the foreseeable future.

As our Chief Executive Officer, Mr. Roy has control over our day-to-day management and the implementation of major strategic investments of our company, subject to authorization and oversight by our board of directors. As a board member and officer, Mr. Roy owes us fiduciary duties, including those of care and loyalty, and must act in good faith and with a view to our interests. However, Nevada law provides that a director or officer is not personally liable to a corporation for a breach of fiduciary duty except for an act or omission constituting a breach and which involves intentional misconduct, fraud or a knowing violation of law. In addition, a director or officer is entitled to a presumption that he or she acted in good faith, on an informed basis and with a view to the interests of the corporation, and is not individually liable unless that presumption is found by a trier of fact to have been rebutted. As a stockholder, even a controlling stockholder, Mr. Roy is entitled to vote his shares, and shares over which he has voting control, in his own interests, which may not always be in the interests of our stockholders generally. Because Mr. Roy, personally and through an affiliated entity, holds substantially all of his economic interest in our business through Switch, Ltd., rather than through us, he may have conflicting interests with holders of shares of our Class A common stock. For example, Mr. Roy may have a different tax position from us, which could influence his decisions regarding whether and when we should dispose of assets or incur new or refinance existing indebtedness, especially in light of the existence of the Tax Receivable Agreement, and whether and when we should undergo certain changes of control within the meaning of the Tax Receivable Agreement or terminate the Tax Receivable Agreement. In addition, the structuring of future transactions may take into consideration these tax or other considerations even where no similar benefit would accrue to us. In addition, Mr. Roy's significant ownership in us and resulting ability to control us may discourage someone from making a significant equity investment in us, or could discourage transactions involving a change in control, including transactions in which holders of shares of our Class A common stock might otherwise receive a premium for their shares over the then-current market price.

Our organizational structure, including the Tax Receivable Agreement, confers certain benefits upon the Members that will not benefit holders of Class A common stock to the same extent as it will benefit the Members.

Our organizational structure, including the Tax Receivable Agreement, confers certain benefits upon the Members that will not benefit the holders of our Class A common stock to the same extent as it will benefit the Members. We have entered into the Tax Receivable Agreement with Switch, Ltd. and the Members and it will provide for the payment by us to the Members of 85% of the amount of tax benefits, if any, that we actually realize, or in some circumstances are deemed to realize, as a result of (i) the increases in the tax basis of assets of Switch, Ltd. resulting from any redemptions or exchanges of Common Units from the Members, and (ii) certain other tax benefits related to our making payments under the Tax Receivable Agreement. Although we will retain 15% of the amount of such tax benefits, this and other aspects of our organizational structure may adversely affect the future trading market for the Class A common stock.

In certain cases, payments under the Tax Receivable Agreement to the Members may be accelerated or significantly exceed the actual benefits we realize in respect of the tax attributes subject to the Tax Receivable Agreement.

The Tax Receivable Agreement provides that upon certain mergers, asset sales, other forms of business combinations or other changes of control or if, at any time, we elect an early termination of the Tax Receivable Agreement, then our obligations, or our successor's obligations, under the Tax Receivable Agreement to make payments thereunder would be based on certain assumptions, including an assumption that we would have sufficient taxable income to fully utilize all potential future tax benefits that are subject to the Tax Receivable Agreement.

As a result of the foregoing, (i) we could be required to make payments under the Tax Receivable Agreement that are greater than the specified percentage of the actual benefits we ultimately realize in respect of the tax benefits that are subject to the Tax Receivable Agreement, and (ii) if we elect to terminate the Tax Receivable Agreement early, we would be required to make an immediate cash payment equal to the present value of the anticipated future tax benefits that are the subject of the Tax Receivable Agreement, which payment may be made significantly in advance of the actual realization, if any, of such future tax benefits. In these situations, our obligations under the Tax Receivable Agreement could have a substantial negative impact on our liquidity and could have the effect of

delaying, deferring or preventing certain mergers, asset sales, other forms of business combinations or other changes of control. There can be no assurance that we will be able to fund or finance our obligations under the Tax Receivable Agreement.

We will not be reimbursed for any payments made to the Members under the Tax Receivable Agreement in the event that any tax benefits are disallowed.

Payments under the Tax Receivable Agreement are based on the tax reporting positions that we determine. The Internal Revenue Service, or IRS, or another tax authority may challenge all or part of the tax basis increases, as well as other related tax positions we take, and a court could sustain such challenge. If the outcome of any such challenge would reasonably be expected to materially affect a recipient's payments under the Tax Receivable Agreement, then we will not be permitted to settle or fail to contest such challenge without the consent (not to be unreasonably withheld or delayed) of each Member that directly or indirectly owns at least 10% of the outstanding Common Units. We will not be reimbursed for any cash payments previously made to the Members under the Tax Receivable Agreement in the event that any tax benefits initially claimed by us and for which payment has been made to a Member are subsequently challenged by a taxing authority and are ultimately disallowed. Instead, any excess cash payments we make to a Member will be netted against any future cash payments that we might otherwise be required to make to such Member under the terms of the Tax Receivable Agreement. However, we might not determine that we have made an excess cash payment to a Member for a number of years following the initial time of such payment. If a taxing authority challenges any of our tax reporting positions, we will not be permitted to reduce future cash payments under the Tax Receivable Agreement until such challenge is finally settled or determined. As a result, we could make payments under the Tax Receivable Agreement in excess of the tax savings that we realize in respect of the tax attributes with respect to a Member that are the subject of the Tax Receivable Agreement.

Fluctuations in our tax obligations and effective tax rate and realization of our deferred tax assets may result in volatility of our operating results.

We are subject to taxes by the U.S. federal, state, local and foreign tax authorities, and our tax liabilities will be affected by the allocation of expenses to differing jurisdictions. We record tax expense based on our estimates of future payments, which may include reserves for uncertain tax positions in multiple tax jurisdictions, and valuation allowances related to certain net deferred tax assets. At any one time, multiple tax years may be subject to audit by various taxing jurisdictions. The results of these audits and negotiations with taxing authorities may affect the ultimate settlement of these matters. We expect that throughout the year there could be ongoing variability in our quarterly tax rates as events occur and exposures are evaluated. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- changes in the valuation of our deferred tax assets and liabilities;
- expected timing and amount of the release of any tax valuation allowances;
- tax effects of stock-based compensation; or
- changes in tax laws, regulations or interpretations thereof, including the U.S. Tax Cuts and Jobs Act that was enacted in December 2017.

In addition, a variety of factors could materially affect our effective tax rate in a given financial statement period, including changes in the mix and level of earnings, varying tax rates in the different jurisdictions in which we operate, fluctuations in valuation allowances, deductibility of certain items, or changes to existing accounting rules or regulations. In addition, tax legislation may be enacted in the future, which could negatively affect our current or future tax structure and effective tax rates. We may be subject to audits of our income, sales, and other transaction taxes by U.S. federal, state, local, and foreign taxing authorities. Outcomes from these audits could have an adverse effect on our operating results and financial condition.

If we were deemed to be an investment company under the Investment Company Act of 1940, as amended, or the 1940 Act, as a result of our ownership of Switch, Ltd., applicable restrictions could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business.

Under Sections 3(a)(1)(A) and (C) of the 1940 Act, a company generally will be deemed to be an "investment company" for purposes of the 1940 Act if (i) it is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting or trading in securities or (ii) it engages, or proposes to engage, in the business of investing, reinvesting, owning, holding or trading in securities and it owns or proposes to acquire investment securities having a value exceeding 40% of the value of its total assets (exclusive of U.S.

government securities and cash items) on an unconsolidated basis. We do not believe that we are an “investment company,” as such term is defined in either of those sections of the 1940 Act.

As the manager of Switch, Ltd., we will control and operate Switch, Ltd. On that basis, we believe that our interest in Switch, Ltd. is not an “investment security” as that term is used in the 1940 Act. However, if we were to cease participation in the management of Switch, Ltd., our interest in Switch, Ltd. could be deemed an “investment security” for purposes of the 1940 Act.

We and Switch, Ltd. intend to conduct our operations so that we will not be deemed an investment company. However, if we were to be deemed an investment company, restrictions imposed by the 1940 Act, including limitations on our capital structure and our ability to transact with affiliates, could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business.

We are a controlled company within the meaning of the NYSE rules, and, as a result, we qualify for and rely on exemptions from certain corporate governance requirements that provide protection to stockholders of other companies. Our stockholders do not have the same protections afforded to stockholders of companies that are subject to such requirements.

We are considered a “controlled company” for the purposes of NYSE rules and corporate governance standards because the Founder Members control more than 50% of our combined voting power. As a controlled company, we are exempt from certain NYSE corporate governance requirements, including requirements that our board of directors have a majority of independent directors and that we either establish Compensation and Nominating and Corporate Governance Committees comprised entirely of independent directors, or otherwise ensure that the compensation of our executive officers and nominees for directors are determined or recommended to the board of directors by the independent members of the board of directors. While we have a majority of independent directors, our Compensation and Nominating and Corporate Governance Committees do not consist entirely of independent directors. Accordingly, our stockholders do not have the same protections afforded to stockholders of companies that are subject to all of the NYSE corporate governance requirements.

Risks Related to Ownership of Our Class A Common Stock

The Members have the right to have their Common Units redeemed or exchanged into shares of Class A common stock, which may cause volatility in our stock price.

As of March 1, 2019, we have an aggregate of more than 700,000,000 shares of Class A common stock authorized but unissued, including 191,426,185 shares of Class A common stock issuable upon redemption or exchange of Common Units. Subject to the restrictions set forth in the Switch Operating Agreement, the Members may have their Common Units redeemed for shares of our Class A common stock. We have also entered into the Registration Rights Agreement pursuant to which the shares of Class A common stock issued to the Members upon redemption of Common Units are eligible for resale, subject to certain limitations set forth therein.

We cannot predict the timing or size of any future issuances of our Class A common stock resulting from the redemption or exchange of Common Units or the effect, if any, that future issuances and sales of shares of our Class A common stock may have on the market price of our Class A common stock. Sales or distributions of substantial amounts of our Class A common stock, including shares issued in connection with an acquisition, or the perception that such sales or distributions could occur, may cause the market price of our Class A common stock to decline.

An active trading market for our Class A common stock may not be sustained.

Our Class A common stock is listed on the NYSE under the symbol “SWCH.” However, we cannot ensure that an active trading market for our Class A common stock will be sustained. In addition, we cannot ensure that the liquidity of any trading market will provide the ability to sell shares of our Class A common stock when or at desired prices.

If our operating and financial performance in any given period does not meet the guidance that we provide to the public, our stock price may decline.

We provide public guidance on our expected operating and financial results for future periods. Such guidance is comprised of forward-looking statements subject to the risks and uncertainties described in this report and in our other public filings and public statements. Our actual results may not always be in line with or exceed the guidance we have provided, especially in times of economic uncertainty. If, in the future, our operating or financial results for a particular period do not meet the guidance we provide or the expectations of investment analysts or if we reduce our guidance for future periods, the market price of our Class A common stock may decline as well.

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our Class A common stock, the price of our Class A common stock could decline.

The trading market for our Class A common stock relies in part on the research and reports that industry or financial analysts publish about us or our business. If one or more of the analysts covering our business downgrades their evaluations of our stock, the price of our Class A common stock could decline. If one or more of these analysts ceases to cover our Class A common stock, we could lose visibility in the market for our stock, which in turn could cause our Class A common stock price to decline.

The trading price of our Class A common stock may be volatile or may decline regardless of our operating performance.

Volatility in the market price of our Class A common stock may affect the ability to sell shares at or above the price paid for such shares. The market price of our Class A common stock may fluctuate significantly in response to a number of factors, most of which we cannot control, including:

- our operating performance and prospects and those of other similar companies;
- actual or anticipated variations in our financial condition, liquidity or results of operations;
- changes in financial projections we may provide to the public or our failure to meet these projections;
- change in the estimates of securities analysts relating to our earnings or other operating metrics;
- publication of research reports about us, our significant customers, our competition, data center companies generally or the technology industry;
- recruitment or departure of key personnel;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- changes in market valuations of similar companies;
- announcements by us or our competitors of significant technological innovations, acquisitions, strategic partnerships, joint ventures, or capital commitments;
- actual or anticipated developments in our business or our competitors’ businesses or the competitive landscape generally;
- developments or disputes concerning our intellectual property or our services, or third-party proprietary rights;
- adverse market reaction to leverage we may incur or equity we may issue in the future;
- actions by institutional stockholders;
- actual or perceived accounting issues, including changes in accounting standards, policies, guidelines, interpretations or principles;
- compliance with NYSE requirements;
- speculation in the press or investment community about our company or industry or the economy in general;
- adverse developments in the creditworthiness, business or prospects of one or more of our significant customers;
- lawsuits threatened or filed against us;
- other events or factors, including those resulting from war, incidents of terrorism, or responses to these events;
- the realization of any of the other risk factors presented in this report;
- the overall performance of the equity markets; and
- general market and economic conditions.

Our anti-takeover provisions could prevent or delay a change in control of our company, even if such change in control would be beneficial to our stockholders.

Provisions of our amended and restated articles of incorporation and amended and restated bylaws, as well as provisions of Nevada law, could discourage, delay or prevent a merger, acquisition or other change in control of our company, even if such change in control would be beneficial to our stockholders. These provisions include:

- the 10 vote per share feature of our Class C common stock;
- authorizing the issuance of “blank check” preferred stock that could be issued by our board of directors to increase the number of outstanding shares and thwart a takeover attempt;
- prohibiting the use of cumulative voting for the election of directors;
- removal of incumbent directors only by the vote of stockholders with not less than two-thirds of the voting power of our outstanding stock;
- prohibiting stockholders from calling special meetings;
- requiring that our board of directors adopt a resolution in order to propose any amendment to our articles of incorporation before it may be considered for approval by our stockholders;
- limiting the ability of stockholders to amend our bylaws and approve certain amendments to our articles of incorporation, in each case by requiring the affirmative vote of holders of at least two-thirds of the votes that stockholders would be entitled to cast in any annual election of directors;
- after the Founder Members no longer beneficially own, directly or indirectly, at least 50% of the Class C common stock beneficially owned by the Founder Members as of the completion of the IPO, or 21,472,324 shares of Class C common stock, requiring all stockholder actions to be taken at a meeting of our stockholders; and
- establishing advance notice and duration of ownership requirements for nominations for election to the board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings.

These provisions could also discourage proxy contests and make it more difficult for our stockholders to elect directors of their choosing and cause us to take other corporate actions they desire. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team.

In addition, we are subject to Nevada’s statute on combinations with interested stockholders (Sections 78.411-78.444 of the Nevada Revised Statutes), which prohibits us from entering into a “combination” with an “interested stockholder” for up to four years, unless certain conditions are met (such as, in some circumstances, approval by our board of directors before such person became an interested stockholder, or by both our board of directors and a supermajority of disinterested stockholders). Under the statute, an interested stockholder is a person who beneficially owns (or, if an affiliate or associate, did, within the prior two years, beneficially own) stock with 10% or more of the corporation’s voting power. The inability of an interested stockholder to pursue the types of combinations restricted by the statute could discourage, delay or prevent a merger, acquisition or other change in control of our company.

Finally, a person acquiring a significant proportion of our voting stock could be precluded from voting all or a portion of such shares under Nevada’s “control share” statute (Sections 78.378-78.3793 of the Nevada Revised Statutes), which prohibits an acquirer of stock, under certain circumstances, from voting its “control shares” of stock acquired up to 90 days prior to crossing certain ownership threshold percentages, unless the acquirer obtains approval of disinterested stockholders or unless the issuing corporation amends its articles of incorporation or bylaws within 10 days of the acquisition to provide that the “control share” statute does not apply to the corporation or the types of existing or future stockholders. If the voting rights are not approved, the statute would allow us to call all of such control shares for redemption at the average price paid for such shares.

Limitations on director and officer liability and our indemnification of our officers and directors may discourage stockholders from bringing suit against a director.

Our amended and restated articles of incorporation provide, pursuant to Nevada corporation law, that a director or officer shall not be personally liable to us or our stockholders for damages as a result of any breach of fiduciary duty as a director or officer, except for acts or omissions which involve intentional misconduct, fraud or knowing violation of law. In addition, a director or officer will not be liable unless presumptions in his or her favor are rebutted. These provisions may discourage stockholders from bringing suit against a director or officer for breach of fiduciary duty

and may reduce the likelihood of derivative litigation brought by stockholders on our behalf against a director or officer. In addition, our amended and restated articles of incorporation and bylaws require indemnification of directors and officers to the fullest extent permitted by Nevada law.

We may issue shares of preferred stock in the future, which could make it difficult for another company to acquire us or could otherwise adversely affect holders of our Class A common stock, which could depress the price of our Class A common stock.

Our amended and restated articles of incorporation authorize us to issue one or more series of preferred stock. Our board of directors has the authority to determine the preferences, limitations and relative rights of the shares of preferred stock and to fix the number of shares constituting any series and the designation of such series, without any further vote or action by our stockholders. Our preferred stock could be issued with voting, liquidation, dividend and other rights superior to the rights of our Class A common stock. The potential issuance of preferred stock may delay or prevent a change in control of us, discourage bids for our Class A common stock at a premium to the market price, and materially and adversely affect the market price and the voting and other rights of the holders of our Class A common stock.

We are subject to securities class action litigation and may be subject to additional litigation in the future, which may harm our business and operating results.

We are, and may in the future become, subject to various legal proceedings and claims that arise in or outside the ordinary course of business. For example, in 2018, several putative class action complaints were filed against us, certain current and former officers and directors and certain underwriters of our IPO alleging federal securities law violations in connection with the IPO. In addition, certain lawsuits were filed against current and former officers and directors of Switch, Inc. alleging breaches of fiduciary duty, unjust enrichment, waste of corporate assets, abuse of control, and gross mismanagement. These plaintiffs also named Switch, Inc. as a nominal defendant. These lawsuits were brought by purported stockholders of Switch, Inc. and arise generally from the same allegations.

We may be subject to similar lawsuits in the future. We may also be called on to defend ourselves against lawsuits relating to our business operations. Some of these claims may seek significant damage amounts due to the nature of our business. Due to the inherent uncertainties of litigation, we cannot accurately predict the nature or ultimate outcome of any such proceedings.

Regardless of their merits, these lawsuits or future lawsuits could subject us to substantial costs, divert resources and the attention of management from our business and harm our business, results of operations, financial condition, reputation and cash flows. These factors may materially and adversely affect the market price of our Class A common stock.

Substantial future sales of our Class A common stock, or the perception in the public markets that these sales may occur, may depress our stock price.

Sales of substantial amounts of our Class A common stock in the public market, or the perception that these sales could occur, could adversely affect the price of our Class A common stock and could impair our ability to raise capital through the sale of additional shares. As of March 1, 2019, we had 55,577,650 shares of Class A common stock outstanding and 191,426,185 authorized but unissued shares of Class A common stock that would be issuable upon redemption or exchange of Common Units.

All of the shares of Class A common stock held by our directors, executive officers and holders of substantially all of our outstanding common stock (including shares of Class A common stock issuable upon redemption or exchange of Common Units) may be sold in the public market, subject to applicable limitations imposed under federal securities laws. Sales of a substantial number of such shares or the perception that such sales may occur, could cause our market price to fall or make it more difficult for our stockholders to sell their Class A common stock at a time and price that they deem appropriate. We have entered into a Registration Rights Agreement pursuant to which the shares of Class A common stock issued upon redemption or exchange of Common Units held by the Members will be eligible for resale, subject to certain limitations set forth therein. We have also filed or intend to file registration statements on Form S-8 under the Securities Act to register all shares of Class A common stock issued or issuable under our 2017 Incentive Award Plan.

In the future, we may also issue additional shares of Class A common stock, or securities convertible or exchangeable for shares of Class A common stock, to raise capital, which could constitute a material portion of our then-outstanding shares of common stock.

We are an emerging growth company, and any decision on our part to comply only with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our Class A common stock less attractive to investors.

We are an emerging growth company, and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to "emerging growth companies," including:

- not being required to have our independent registered public accounting firm audit our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation or golden parachute payments not previously approved.

We could be an emerging growth company for up to five years following our IPO. Our status as an emerging growth company will end as soon as any of the following takes place:

- the last day of the fiscal year in which we have more than $1.07 billion in annual revenue;
- the date we qualify as a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates;
- the date on which we have issued, in any three-year period, more than $1.0 billion in non-convertible debt securities; or
- the last day of the fiscal year ending after the fifth anniversary of our IPO.

We cannot predict if investors will find our Class A common stock less attractive if we choose to rely on any of the exemptions afforded emerging growth companies. If some investors find our Class A common stock less attractive because we rely on any of these exemptions, there may be a less active trading market for our Class A common stock and the market price of our Class A common stock may be more volatile.

In addition, the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a registration statement under the Securities Act declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. We have elected not to opt out of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of our consolidated financial statements with another public company, which is neither an emerging growth company nor a company that has opted out of using the extended transition period difficult because of the potential differences in accounting standards used.

We cannot predict the impact our capital structure may have on our stock price.

In July 2017, S&P Dow Jones, a provider of widely followed stock indices, announced that companies with multiple share classes, such as ours, will not be eligible for inclusion in certain of their indices. As a result, our Class A common stock will likely not be eligible for these stock indices. Additionally, FTSE Russell, another provider of widely followed stock indices, recently stated that it plans to require new constituents of its indices to have at least five percent of their voting rights in the hands of public stockholders. Many investment funds are precluded from investing in companies that are not included in such indices, and these funds would be unable to purchase our Class A common stock. We cannot predict whether other stock indices will take a similar approach to S&P Dow Jones or FTSE Russell in the future. Exclusion from indices could make our Class A common stock less attractive to investors and, as a result, the market price of our Class A common stock could be adversely affected.

We incur costs as a result of being a public company and in the administration of our complex organizational structure.

As a public company, we incur significant legal, accounting, insurance and other expenses, including costs associated with public company reporting requirements. We also have incurred and will incur costs associated with the Sarbanes-Oxley Act and related rules implemented by the Securities and Exchange Commission, or the SEC, that have not been reflected in our historical consolidated financial statements for periods prior to the IPO. We also

incur ongoing periodic expenses in connection with the administration of our organizational structure. The expenses incurred by public companies generally for reporting and corporate governance purposes have been increasing. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly, although we are currently unable to estimate these costs with any degree of certainty. In assessing these costs, we will take into account expenses related to insurance, legal, accounting, and compliance activities, as well as other expenses not currently incurred. These laws and regulations could also make it more difficult or costly for us to obtain certain types of insurance, including director and officer liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. These laws and regulations could also make it more difficult for us to obtain certain types of insurance and to attract and retain qualified persons to serve on our board of directors, our board committees or as our executive officers. Furthermore, if we are unable to satisfy our obligations as a public company, we could be subject to delisting of our Class A common stock, fines, sanctions and other regulatory action and potentially civil litigation. Our organizational structure, including our Tax Receivable Agreement, is complex, and we require the expertise of various tax, legal and accounting advisers to ensure compliance with applicable laws and regulations. We have incurred and will continue to incur significant expenses in connection with the administration of our organizational structure. As a result, our expenses for legal, tax and accounting compliance may be significantly greater than other companies of our size that do not have a similar organizational structure or a tax receivable agreement in place.

We have identified material weaknesses in our internal control over financial reporting and may identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls or disclosure controls and procedures, which may result in material misstatements of our consolidated financial statements or cause us to fail to meet our periodic reporting obligations.

As of December 31, 2018, we have two material weaknesses in our internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

The first material weakness was identified in connection with the audit of our 2016 consolidated financial statements. This material weakness was due to a failure of the information and communication component of internal control to provide complete and accurate output because of deficiencies in the communication process. Contracts executed by various departments were not communicated, on a timely basis, to the accounting department, resulting in recording out-of-period adjustments that impacted the recognition and disclosure of amounts in the consolidated financial statements during the year ended December 31, 2016. We concluded this material weakness continued to exist as of December 31, 2018.

The second material weakness, which was identified in connection with the audit of our 2017 consolidated financial statements, relates to an insufficient complement of resources with an appropriate level of accounting expertise, knowledge, and training commensurate with the complexity of our financial reporting matters. This material weakness led to pervasive immaterial adjustments to our annual and interim consolidated financial statements, inadequate review over account reconciliations and the inability to maintain segregation of duties over journal entries resulting in the lack of an effective control environment. We concluded this material weakness continued to exist as of December 31, 2018.

These material weaknesses could result in a misstatement of substantially all account balances or disclosures that would result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected.

We have implemented and continue to implement measures designed to improve our internal control over financial reporting to remediate these material weaknesses, including hiring additional personnel with appropriate education, experience and certifications for key positions in the financial reporting and accounting function, implementing policies and procedures to improve our ability to communicate and share information in a timely manner, as well as designing and implementing improved processes and internal controls. In addition, we are formalizing our internal control documentation and strengthening supervisory reviews by our management.

While we believe that these efforts will improve our internal control over financial reporting, the implementation of these measures is ongoing and will require validation and testing of the design and operating effectiveness of internal controls over a sustained period of financial reporting cycles. We cannot ensure that the measures we have taken to date, and are continuing to implement, will be sufficient to remediate the material weaknesses we have identified or avoid potential future material weaknesses. If the steps we take do not correct the material weakness in a timely manner, we will be unable to conclude that we maintain effective internal control over financial reporting.

Accordingly, there could continue to be a reasonable possibility that a material misstatement of our financial statements would not be prevented or detected on a timely basis.

Our ability to pay dividends on our Class A common stock is subject to the discretion of our board of directors and our amended and restated credit agreement as well as future agreements.

Although we intend to pay quarterly cash dividends on our Class A common stock, the declaration, amount and payment of any future dividends on shares of Class A common stock will be at the sole discretion of our board of directors, and will depend upon results of operations, financial condition, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant. The continued operation and expansion of our business will require substantial funding. We are a holding company, and substantially all of our operations are carried out by Switch, Ltd. and its subsidiaries. Under our amended and restated credit agreement, Switch, Ltd. is currently restricted from paying cash dividends or making certain other restricted payments, and we expect these restrictions to continue in the future, which may in turn limit our ability to pay dividends on our Class A common stock. Our ability to pay dividends may also be restricted by the terms of any future credit agreement or any future debt or preferred equity securities of ours or of our subsidiaries. Accordingly, realization of a gain on an investment in our Class A common stock may depend on the appreciation of the price of our Class A common stock, which may never occur.

The provision of our articles of incorporation requiring exclusive forum in the Eighth Judicial District Court of Clark County, Nevada for certain types of lawsuits may have the effect of discouraging lawsuits against our directors and officers.

Our amended and restated articles of incorporation require that (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us or our officers, directors or employees arising pursuant to any provision of Nevada law regarding corporations, mergers, conversions, exchanges or domestications, or our amended and restated articles of incorporation or amended and restated bylaws or (iv) any action asserting a claim against us or any of our directors, officers or other employees governed by the internal affairs doctrine, will have to be brought only in the Eighth Judicial District Court of Clark County, Nevada. Although we believe this provision benefits us by providing increased consistency in the application of Nevada law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

The information set forth under the captions “Our Campus Locations” and “Our Portfolio” in Item 1 of this Form 10-K is incorporated by reference herein.

Item 3. Legal Proceedings.

On September 7, 2017, Switch, Ltd. and Switch, Inc. were named in a lawsuit filed in the U.S. District Court for the District of Nevada by V5 Technologies formerly d/b/a Cobalt Data Centers (now defunct). The lawsuit alleges, among other things, that Switch, Ltd. and Switch, Inc. monopolized the Las Vegas Metropolitan area of Southern Nevada’s data center colocation market and engaged in unfair business practices leading to the failure of Cobalt Data Centers in 2015 and seeks monetary damages in an amount yet to be disclosed. Switch, Ltd. and Switch, Inc. are vigorously defending the case.

On September 12, 2017, Switch, Ltd. filed a complaint in the Eighth Judicial District of Nevada against the consultant, Stephen Fairfax, and his business, MTechnology Inc. Among other claims, Switch raised allegations of breach of contract and misappropriation of trade secrets. The complaint also alleged that Aligned Data Centers LLC hired Mr. Fairfax and MTechnology to design their data centers; that this consultant had toured Switch under a non-disclosure agreement; and that this consultant breached his confidentiality agreements with Switch by using Switch’s designs to design the Aligned data centers. Switch, Ltd. is seeking an injunction to prevent the defendants in the lawsuit from infringing Switch, Ltd.’s patents, as well as other remedies.

Four substantially similar putative class action complaints, captioned Martz v. Switch, Inc. et al. (filed April 20, 2018); Palkon v. Switch, Inc. et al. (filed April 30, 2018); Chun v. Switch, Inc. et al. (filed May 11, 2018); and Silverberg v. Switch, Inc. et al. (filed June 6, 2018), were filed in the Eighth Judicial District of Nevada, and subsequently consolidated into a single case (the “State Court Securities Action”). Additionally, on June 11, 2018, one putative

class action complaint captioned Cai v. Switch, Inc. et al. was filed in the United States District Court for the District of New Jersey (the “Federal Court Securities Action,” and collectively with the State Court Securities Action, the “Securities Actions”) and subsequently transferred to the Eighth Judicial District of Nevada in August 2018 and the federal court appointed Oscar Farach lead plaintiff. These lawsuits were filed against Switch, Inc., certain current and former officers and directors and certain underwriters of Switch, Inc.’s IPO alleging federal securities law violations in connection with the IPO. These lawsuits were brought by purported stockholders of Switch, Inc. seeking to represent a class of stockholders who purchased Class A common stock in or traceable to the IPO, and seek unspecified damages and other relief. In October 2018, the state court granted defendants motion to stay the State Court Securities Action in favor of the Federal Court Securities Action. In November 2018, the plaintiffs in the State Court Securities Action filed a petition for writ of mandamus challenging the stay order. In December 2018, the Supreme Court of Nevada directed Switch and other defendants to file an answer to the writ by February 2019. In October 2018, the lead plaintiff of the Federal Court Securities Action filed an amended complaint. In November 2018, Switch, Inc. and other defendants filed a motion to dismiss for failure to state a claim and a motion to strike. Switch, Inc. believes that these lawsuits are without merit and intends to continue to vigorously defend against them.

On September 10, 2018, two purported stockholders of Switch, Inc. filed substantially similar shareholder derivative complaints, respectively captioned Liu v. Roy et al., and Zhao v. Roy et al., in the Eighth Judicial District of Nevada, which were subsequently consolidated into a single case the “Derivative Shareholder Action”). These lawsuits allege breaches of fiduciary duty, unjust enrichment, waste of corporate assets, abuse of control, and gross mismanagement against certain current and former officers and directors of Switch, Inc. The plaintiffs also named Switch, Inc. as a nominal defendant. The complaints arise generally from the same allegations described in the State Court Securities Action and Federal Court Securities Action. The plaintiffs seek unspecified damages on Switch, Inc.’s behalf from the officer and director defendants, certain corporate governance actions, compensatory awards, and other relief. In December 2018, the court granted the parties’ stipulation to stay the Derivative Shareholder Action until the Securities Actions are dismissed with prejudice or until the defendants file an answer in any of the Securities Actions.

The outcomes of the legal proceedings are inherently unpredictable, subject to significant uncertainties, and could be material to the Company’s financial condition, results of operations, and cash flows for a particular period. Where the Company is a defendant, it will vigorously defend against the claims pleaded against it. These actions are each in preliminary stages and management has determined that based on proceedings to date, it is currently unable to determine the probability of the outcome of these actions or the range of reasonably possible loss, if any.

Item 4. Mine Safety Disclosures.

Not applicable.

Part II.

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market information

Our Class A common stock has traded on the New York Stock Exchange, or NYSE, under the symbol “SWCH” since October 6, 2017. Prior to that date, there was no public market for our Class A common stock. Our Class B common stock and Class C common stock are neither listed nor traded on any stock exchange.

Holders of record

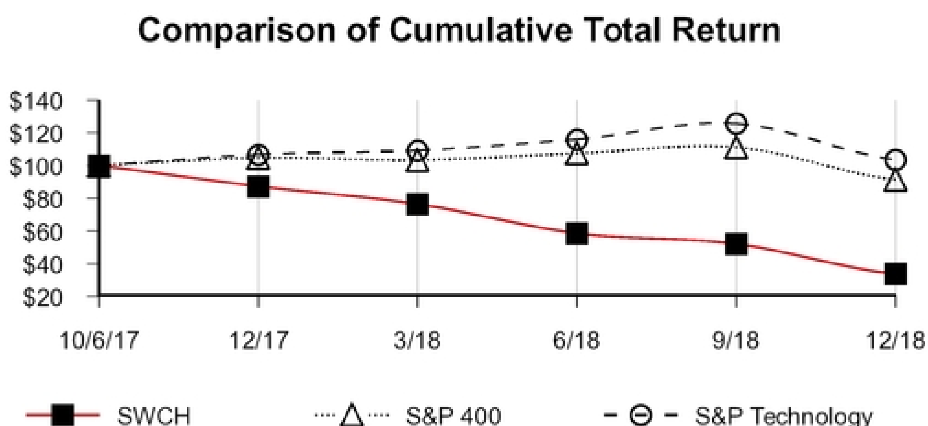
At March 1, 2019, there were eight holders of record of our Class A common stock. The number of record holders does not include persons who held shares of our Class A common stock in nominee or “street name” accounts through brokers. As of March 1, 2019, there were 108 and three holders of record of our Class B common stock and Class C common stock, respectively.

Dividends

We currently pay regular quarterly cash dividends and expect to continue paying regular cash dividends on a quarterly basis. Prior to the payment of such dividends, Switch, Ltd. makes and expects to continue making a cash distribution to all of its holders of record of Common Units, including us. The declaration, amount and payment of any future dividends on shares of Class A common stock will be at the discretion of our board of directors and will depend upon many factors, including our results of operations, financial condition, capital requirements, restrictions in Switch, Ltd.'s debt agreements and other factors that our board of directors deem relevant. We are a holding company, and substantially all of our operations are carried out by Switch, Ltd. and its subsidiaries. Additionally, Switch, Ltd.’s amended and restated credit agreement places certain restrictions on its ability to pay cash dividends or make certain other restricted payments, and we expect these restrictions to continue in the future, which may in turn limit our ability to pay dividends on our Class A common stock. Our ability to pay dividends may also be restricted by the terms of any future credit agreement or any future debt or preferred equity securities of us or our subsidiaries. Holders of our Class B common stock and Class C common stock are not entitled to participate in any dividends declared by our board of directors.

Performance graph

The graph below compares the cumulative total stockholder return on our Class A common stock with the cumulative total return on the Standard and Poor’s MidCap 400 Index, or the S&P 400, and the Standard and Poor’s Technology Select Sector Index, or S&P Technology, for the period beginning on October 6, 2017 (the date our Class A common stock commenced trading on the NYSE) and ending on December 31, 2018, assuming an investment of $100 on October 6, 2017 and the reinvestment of dividends where applicable.



Recent sales of unregistered securities

None.

Issuer purchases of equity securities

None.

Item 6. Selected Financial Data.

The following selected financial data for the years ended December 31, 2018, 2017 and 2016 and the selected balance sheet data as of December 31, 2018 and 2017 are derived from our audited consolidated financial statements included elsewhere in this Form 10-K. The following selected financial data for the years ended December 31, 2015 and 2014 and the selected balance sheet data as of December 31, 2016 and 2015 are derived from our audited consolidated financial statements not included in this Form 10-K. Our historical results are not necessarily indicative of the results to be expected in the future.

	Years Ended December 31,				
	2018	2017	2016	2015	2014
	(in thousands, except per share/unit data)				
Consolidated Statements of Operations Data[1]:					
Revenue	$ 405,860	$ 378,275	$ 318,352	$ 265,870	$ 207,306
Cost of revenue	224,413	198,230	168,844	141,060	108,902
Gross profit	181,447	180,045	149,508	124,810	98,404
Selling, general and administrative expense	126,768	160,569	71,420	45,251	35,570
Impact fee expense	—	649	27,018	—	—
Income from operations	54,679	18,827	51,070	79,559	62,834
Other income (expense):					
Interest expense, including amortization of debt issuance costs	(26,370)	(25,079)	(10,836)	(7,682)	(6,772)
Equity in net (losses) earnings of investments	(331)	(1,077)	(10,138)	821	(1,053)
Loss on extinguishment of debt	—	(3,565)	—	(212)	—
Gain on sale of asset	—	—	—	248	—
Impairment of notes receivable	—	—	(2,371)	—	—
Gain on lease termination	—	—	2,801	—	—
Other	3,283	1,333	842	738	1,500
Total other expense	(23,418)	(28,388)	(19,702)	(6,087)	(6,325)
Income (loss) before income taxes	31,261	(9,561)	31,368	73,472	56,509
Income tax (expense) benefit	(1,943)	981	—	—	—
Net income (loss)	29,318	(8,580)	31,368	73,472	56,509
Less: net income attributable to noncontrolling interest	25,266	6,628	—	—	—
Net income (loss) attributable to Switch, Inc.	$ 4,052	$ (15,208)	$ 31,368	$ 73,472	$ 56,509
Net income (loss) per share/unit:					
Basic	$ 0.09	$ (1.88)	$ 0.16	$ 0.37	$ 0.28
Diluted	$ 0.09	$ (1.88)	$ 0.15	$ 0.37	$ 0.28
Weighted average shares/units outstanding:					
Basic	45,682	8,074	199,047	196,773	198,432
Diluted	45,753	8,074	203,461	199,272	203,411
Cash dividends declared per share	$ 0.06	$ 0.01	$ —	$ —	$ —

(1) Switch, Ltd. and its subsidiaries is our predecessor for accounting purposes and, accordingly, amounts for the period from January 1, 2017 through October 10, 2017, and for the years ended December 31, 2016, 2015 and 2014 represent the historical consolidated operations of Switch, Ltd. and its subsidiaries. Switch, Inc. had no business transactions or activities during this period from its incorporation on June 13, 2017 through October 10, 2017, with the exception of the issuance of one share at par value of $0.001 per share, which was canceled as of the closing date of our IPO. The amounts for the period from October 11, 2017 through December 31, 2017 and the year ended December 31, 2018 reflect the consolidated operations of Switch, Inc.

	December 31,			
	2018	2017	2016	2015
	(in thousands)			
Consolidated Balance Sheet Data[(1)]**:**				
Cash and cash equivalents	$ 81,560	$ 264,666	$ 22,713	$ 14,192
Property and equipment, net	$ 1,302,770	$ 1,133,572	$ 874,259	$ 598,234
Total assets	$ 1,460,030	$ 1,434,759	$ 921,015	$ 647,578
Deferred revenue, current and noncurrent	$ 33,060	$ 30,864	$ 24,858	$ 14,253
Long-term debt, current and noncurrent	$ 586,566	$ 591,760	$ 472,067	$ 292,517
Capital lease obligations, current and noncurrent	$ 19,466	$ 21,775	$ 23,466	$ 19,466
Total stockholders'/members' equity	$ 708,352	$ 742,133	$ 278,363	$ 284,694

(1) Switch, Ltd. and its subsidiaries is our predecessor for accounting purposes and, accordingly, amounts as of December 31, 2016 and 2015 represent the historical consolidated operations of Switch, Ltd. and its subsidiaries. The amounts as of December 31, 2018 and 2017 reflect the consolidated operations of Switch, Inc. Switch, Inc. had no business transactions or activities and had no assets or liabilities during the period from its incorporation on June 13, 2017 through October 10, 2017, with the exception of the issuance of one share at par value of $0.001 per share, which was canceled as of the closing date of our IPO.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the audited consolidated financial statements and related notes included elsewhere in this Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in "Risk Factors" included elsewhere in this Form 10-K.

Overview

We are a technology infrastructure company powering the sustainable growth of the connected world and the Internet of Everything. Using our technology platform, we provide solutions to help enable that growth. Our advanced data centers are the center of our platform and provide power densities that exceed industry averages with efficient cooling, while being powered by 100% renewable energy. These hyper scale data centers address the growing challenges facing the data center industry. Our critical infrastructure components in our data centers are purpose-built to satisfy customers' needs, drive efficiency and enable the deployment of highly advanced computing technologies.

We presently own and operate three primary campus locations, called Primes, which encompass 11 colocation facilities with an aggregate of up to 4.4 million gross square feet, or GSF, of space. Our Primes consist of The Core Campus in Las Vegas, Nevada; The Citadel Campus near Reno, Nevada; and The Pyramid Campus in Grand Rapids, Michigan. In addition, we have begun construction on a fourth Prime, The Keep Campus, in Atlanta, Georgia. In addition to our Primes, we hold a 50% ownership interest in SUPERNAP International, S.A., or SUPERNAP International, which has deployed facilities in Italy and Thailand. Until March 31, 2018, we accounted for this ownership interest under the equity method of accounting.

We currently have more than 850 customers, including some of the world's largest technology and digital media companies, cloud, IT and software providers, financial institutions and network and telecommunications providers. Our ecosystem connects over 250 cloud, IT and software providers and 80 network and telecommunications providers. Our business is based on a recurring revenue model comprised of (1) colocation, which includes the licensing and leasing of cabinet space and power; and (2) connectivity services, which include cross-connects, broadband services and external connectivity. We consider these services recurring because our customers are generally billed on a fixed and recurring basis each month for the duration of their contract. We derive more than 95% of our revenue from recurring revenue and we expect to continue to do so for the foreseeable future. For the years ended December 31, 2018, 2017, and 2016, our largest customer, eBay, Inc. and its affiliates, accounted for 10.5%, 10.9%, and 13.3% of our revenue, respectively.

Our non-recurring revenue is primarily comprised of installation services related to a customer's initial deployment. These services are non-recurring because they are typically billed once, upon completion of the installation.

Our revenue has grown from $318.4 million in 2016 to $405.9 million in 2018. We generated net income of $29.3 million during the year ended December 31, 2018. Due in part to a non-recurring equity-based compensation expense related to the accelerated vesting of certain incentive units upon our IPO and fully vested awards granted under our 2017 Incentive Award Plan, we generated a net loss of $8.6 million for the year ended December 31, 2017. We generated net income of $31.4 million during the year ended December 31, 2016. During the years ended December 31, 2018, 2017, and 2016, we generated Adjusted EBITDA of $201.7 million, $194.7 million, and $153.2 million, respectively, representing an Adjusted EBITDA margin of 49.7%, 51.5%, and 48.1%, respectively.

Factors that May Influence Future Results of Operations

Market and Economic Conditions. We are affected by general business and economic conditions in the United States and globally. These conditions include short-term and long-term interest rates, inflation, money supply, political issues, legislative and regulatory changes, fluctuations in both debt and equity capital markets and broad trends in industry and finance, all of which are beyond our control. Macroeconomic conditions that affect the economy and the economic outlook of the United States and the rest of the world could adversely affect our customers and vendors, which could adversely affect our results of operations and financial condition.

Growth and Expansion Activities. Our future revenue growth will depend on our ability to maintain our existing revenue base while expanding and increasing utilization at our existing and developing Prime Campus locations. Our existing Prime Campus locations currently encompass 11 colocation facilities with an aggregate of up to 4.4 million GSF of space and up to 455 MW of power. As of December 31, 2018, the utilization rates at these Prime Campuses, based on currently available cabinets, were approximately 91%, 58%, and 88% at The Core Campus, The Citadel Campus, and The Pyramid Campus, respectively. Additionally, each of our existing Primes has room for

further expansion, and we have designs to add up to 5.9 million GSF of additional space to The Citadel Campus and 940,000 GSF of additional space to The Pyramid Campus. We may be unable to attract customers to our data centers or retain them for a number of reasons, including if we fail to provide competitive pricing terms, provide space that is deemed to be inferior to that of our competitors or are unable to provide services that our existing and potential customers desire.

Cost of Power. We are a large consumer of power, and power costs account for a significant portion of our cost of revenue. We require power supply to provide many services we offer, such as powering and cooling our customers' IT equipment and operating critical data center plant and equipment infrastructure. Pursuant to our service agreements, we provide our customers with a committed level of power supply availability and we have committed to operating our data centers with 100% clean and renewable energy. Most of our customer agreements provide the ability to increase our cost of service in response to an increase in the cost of energy; however, our gross profit can be adversely affected by increases in our cost of energy if we choose not to pass along the increases to our customers. For instance, the seasonal increase in energy costs during the summer months has not historically resulted in an adjustment to our customer pricing, and therefore has resulted in a decrease in our gross profit in those periods. Nonetheless, since becoming an unbundled purchaser of energy in Nevada, we are able to purchase power in the open market through long-term power contracts, which we believe can subsequently reduce variability of power costs. Additionally, our existing customers may not renew their contracts with us or may reduce the services purchased from us, or we may be unable to attract new customers, if we experience increased power costs or limited availability of power resources, including clean and renewable energy. Our brand or reputation could be adversely affected if we are unable to operate our data centers with 100% clean and renewable energy.

Capital Expenditures. Our growth and expansion initiatives require significant capital. The costs of constructing, developing, operating and maintaining data centers and growing our operations are substantial. While we strive to match the growth of our facilities to the demand for services, we still must spend significant amounts before we receive any revenue. If we are unable to generate sufficient capital to meet our anticipated capital requirements, our growth could slow and operations could be adversely affected. Our maintenance capital expenditures were $8.0 million for the year ended December 31, 2018.

Growth in Customers. Our results of operations could be significantly affected by the growth or reduction of our customer base. We have over 850 customers, including some of the world's largest technology and digital media companies, cloud and managed service providers, financial institutions and telecommunications providers. We believe we have significant opportunities to both grow penetration of our existing customers as well as attract new customers. Our ability to attract new customers depends on a number of factors, including our ability to offer high quality services at competitive prices and the capability of our marketing and sales team to attract new customers. Additionally, a significant portion of our revenue is highly dependent on our top 10 customers and the loss of these customers or any significant decrease in their business could adversely affect our results of operations.

Key Metrics and Non-GAAP Financial Measures

We monitor the following unaudited key metrics and financial measures that are not calculated in accordance with accounting principles generally accepted in the United States of America, or GAAP, to help us evaluate our business, identify trends affecting our business, formulate business plans and make strategic decisions.

	Years Ended December 31,		
	2018	2017	2016
	(dollars in thousands)		
Recurring revenue	$ 395,743	$ 369,926	$ 308,200
Capital expenditures	$ 275,524	$ 402,561	$ 287,097
Adjusted EBITDA	$ 201,700	$ 194,720	$ 153,173
Adjusted EBITDA margin	49.7%	51.5%	48.1%

Recurring Revenue

We calculate recurring revenue as contractual revenue under signed contracts calculated in accordance with GAAP for the applicable period. Recurring revenue does not include any installation or other one-time revenue, which would be classified as non-recurring revenue. Management uses recurring revenue as a supplemental performance measure because it provides a useful measure of increases or decreases in contractual revenue from our customers and provides a baseline revenue measure on which to plan expenses.

The following table sets forth a reconciliation of recurring revenue to total revenue:

	Years Ended December 31,		
	2018	2017	2016
	(in thousands)		
Recurring revenue	$ 395,743	$ 369,926	$ 308,200
Non-recurring revenue	10,117	8,349	10,152
Revenue	$ 405,860	$ 378,275	$ 318,352

Capital Expenditures

We define capital expenditures as cash purchases of property and equipment during a particular period. We believe that capital expenditures is a useful metric because it provides information regarding the growth of our technology infrastructure platform and the potential to expand our services and add new customers.

Adjusted EBITDA and Adjusted EBITDA Margin

We define Adjusted EBITDA as net income (loss) adjusted for interest expense, interest income, income taxes, depreciation and amortization of property and equipment and for specific and defined supplemental adjustments to exclude (i) non-cash equity-based compensation expense; (ii) equity in net earnings (losses) of investments; and (iii) certain other items that we believe are not indicative of our core operating performance. We define Adjusted EBITDA margin as Adjusted EBITDA divided by revenue.

Our Adjusted EBITDA and Adjusted EBITDA margin are not prepared in accordance with GAAP, and should not be considered in isolation of, or as an alternative to measures prepared in accordance with GAAP. We present Adjusted EBITDA and Adjusted EBITDA margin because we believe certain investors use them as measures of a company's historical operating performance and its ability to service and incur debt and make capital expenditures. We believe that the inclusion of certain adjustments in presenting Adjusted EBITDA and Adjusted EBITDA margin is appropriate to provide additional information to investors because Adjusted EBITDA and Adjusted EBITDA margin exclude certain items that we believe are not indicative of our core operating performance and that are not excluded in the calculation of EBITDA. Adjusted EBITDA is also similar to the measures used under the debt covenants included in our credit facilities, except that the definition used in our credit facilities does not exclude cash gains or shareholder-related litigation expense. Accordingly, we believe that Adjusted EBITDA and Adjusted EBITDA margin provide useful information to investors and others in understanding and evaluating our operating results, enhancing the overall understanding of our past performance and future prospects, and allowing for greater transparency with respect to key financial metrics used by our management in its financial and operational decision-making.

Our non-GAAP financial measures have limitations as analytical tools and you should not consider them in isolation or as a substitute for an analysis of our results under GAAP. There are a number of limitations related to the use of these non-GAAP financial measures versus their nearest GAAP equivalents. Non-GAAP financial measures may not provide information directly comparable to measures provided by other companies in our industry, as those other companies may calculate their non-GAAP financial measures differently. In addition, the non-GAAP financial measures exclude certain recurring expenses that have been and will continue to be significant expenses of our business.

The following table sets forth a reconciliation of our net income (loss) to Adjusted EBITDA:

	Years Ended December 31,				
	2018	2017	2016	2015	2014
	(in thousands)				
Net income (loss)	$ 29,318	$ (8,580)	$ 31,368	$ 73,472	$ 56,509
Interest expense	26,370	25,079	10,836	7,682	6,772
Interest income[(1)]	(2,383)	(572)	(332)	(260)	(1,024)
Income tax expense (benefit)	1,943	(981)	—	—	—
Depreciation and amortization of property and equipment	106,666	89,124	66,591	55,355	43,918
Loss on disposal of property and equipment	1,206	569	1,994	1,307	695
Equity-based compensation	35,733	84,790	5,935	5,237	4,291
Equity in net losses (earnings) of investments	331	1,077	10,138	(821)	1,053
Shareholder-related litigation expense	2,516	—	—	—	—
Loss on extinguishment of debt	—	3,565	—	212	—
Impact fee expense	—	649	27,018	—	—
Gain on lease termination	—	—	(2,801)	—	—
Impairment of notes receivable and interest receivable[(2)]	—	—	2,426	—	—
Gain on sale of asset	—	—	—	(248)	—
Adjusted EBITDA	$ 201,700	$ 194,720	$ 153,173	$ 141,936	$ 112,214

(1) Interest income is included in the “Other” line of other income (expense) in our consolidated statements of operations and comprehensive income (loss).
(2) The write-off of interest income receivable pertaining to our notes receivable with Planet3, Inc. is included in the selling, general and administrative expense line in our consolidated statements of operations and comprehensive income (loss).

Components of Results of Operations

Revenue

During the years ended December 31, 2018, 2017, and 2016, we derived more than 95% of our revenue from recurring revenue streams, consisting primarily of (1) colocation, which includes the licensing and leasing of cabinet space and power; and (2) connectivity services, which include cross-connects, broadband services and external connectivity. The remainder of our revenue is from non-recurring revenue, which primarily includes installation services related to a customer’s initial deployment and contract settlements. Based on the current growth stage of our business, we expect increases in revenue to be driven primarily by increases in volume, rather than changes in the prices we charge to our customers.

Revenue from recurring revenue streams is generally billed monthly and recognized ratably over the period to which the service relates. Contracts with our customers generally have terms of three to five years. Non-recurring installation fees, although generally paid in a lump sum upon installation, are deferred and recognized ratably over the expected life of the installation. Revenue from connectivity services is generally recognized on a gross basis, primarily because we generally act as the principal in the transactions, take title to services and bear credit risk. Revenue from contract settlements, which result when a customer wishes to terminate their contract early, is recognized when no remaining performance obligations exist, to the extent that the revenue has not previously been recognized.

Cost of Revenue

Cost of revenue consists primarily of depreciation and amortization expense, expenses associated with the operations of our facilities, including electricity and other utility costs and repairs and maintenance, data center employees’ salaries and benefits, including equity-based compensation, connectivity costs, and rental payments related to our leased buildings and land used in data center operations. A substantial portion of our cost of revenue is fixed in nature and may not vary significantly from period to period, unless we expand our existing data centers or open new data centers. However, there are certain costs that are considered more variable in nature, including utilities and supplies that are directly related to growth in our existing and new customer base. We have seen the cost of our utilities, specifically electricity, decrease as we have become an unbundled purchaser of energy in Nevada, and are able to purchase energy from the open market. The largest portion of our utility costs is fixed and a smaller portion is variable with market conditions.

Gross Profit and Gross Margin

Gross profit, or revenue less cost of revenue, and gross margin, or gross profit as a percentage of revenue, has been and will continue to be affected by various factors, including customer growth, the expansion of our existing data centers or opening of new data centers, and the cost of our utilities, specifically electricity. Our gross margin may fluctuate from period to period depending on the interplay of these factors.

Operating Expenses

Selling, General and Administrative Expense

Selling, general and administrative expense consists primarily of salaries and related expenses, including equity-based compensation, accounting, legal and other professional service fees, real estate and personal property taxes, rental payments related to our corporate office lease, marketing and selling expenses, including sponsorships, commissions paid to partners, travel, depreciation and amortization expense, insurance, and other facility and employee related costs. This expense classification may not be comparable to those of other companies. We expect to incur additional selling, general and administrative expenses as we continue to scale our operations to invest in sales and marketing initiatives to further increase our revenue and support our growth. We also expect to continue to incur general and administrative expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the SEC and those of the New York Stock Exchange, additional insurance expenses, investor relations activities and other administrative and professional services. Further, we expect to continue to incur general and administrative expenses in the form of equity-based compensation as a result of the continued vesting of Common Unit awards granted to certain of our executives in 2017 and equity awards granted subsequent to our IPO. As a result, we expect that our selling, general and administrative expense will continue to increase in absolute dollars, but may fluctuate as a percentage of our revenue from period to period.

Impact Fee Expense

In September 2016, we filed an application with the Public Utilities Commission of Nevada, or PUCN, to become an unbundled purchaser of energy, capacity and ancillary services in Nevada from a new provider of electric resources. The application was approved in December 2016 and we paid the impact fee of $27.0 million in a lump sum in May 2017 to NV Energy, our former energy provider. As there is no future economic benefit to us from the impact fee, it was recognized as an expense in December 2016. In November 2017, we also incurred an additional $0.6 million in impact fee expense related to deferred energy adjustments representing the difference between actual costs and amounts collected by NV Energy for fuel and purchased power. Similarly, as no future economic benefit is realized by us from the deferred energy adjustments, it was recognized as an expense and subsequently paid in November 2017. We did not incur impact fee expense during the year ended December 31, 2018 and do not expect to incur similar fees in future periods.

Other Income (Expense) Items

Interest Expense

Interest expense consists primarily of interest on our credit facilities and amortization of debt issuance costs, net of amounts capitalized.

Equity in Net Losses of Investments

Equity in net losses of investments primarily consists of our share of results of operations from our equity method investments, including foreign currency translation adjustments. We currently hold two investments, SUPERNAP International and Planet3, Inc., or Planet3. Our investments in SUPERNAP International and Planet3 were accounted for under the equity method of accounting through March 31, 2018 and December 31, 2016, respectively, and our share of their results of operations are included within equity in net losses of investments for each applicable period presented. As of March 31, 2018, the carrying value of our investment in SUPERNAP International was reduced to zero as a result of recording our share of its losses. Our losses will continue to include the foreign currency translation adjustments in our investment. As of December 31, 2016, we determined an other than temporary loss in the value of our investment in Planet3 had occurred, and we therefore fully impaired its carrying value. Accordingly, we discontinued the equity method of accounting for our investments in SUPERNAP International and Planet3 as of March 31, 2018 and December 31, 2016, respectively, and will not provide for additional losses until our share of future net income, if any, equals the share of net losses not recognized during the period the equity method was suspended.

Other

Other (expense) income items primarily consist of other items that have impacted our results of operations such as loss on extinguishment of debt resulting from the termination and full repayment of previously held debt obligations, interest income, impairment of notes receivable and gains and losses resulting from other transactions.

Income Taxes

As a result of the IPO and certain organizational transactions completed in connection with our IPO, we became the sole manager of Switch, Ltd., which is treated as a partnership for U.S. federal and most applicable state and local income tax purposes. As a partnership, Switch, Ltd. is not subject to U.S. federal and certain state and local income taxes. Any taxable income or loss generated by Switch, Ltd. is passed through to, and included in the taxable income or loss of, its members, including us, on a pro rata basis. We are subject to U.S. federal income taxes, in addition to state and local income taxes with respect to our allocable share of any taxable income or loss generated by Switch, Ltd.

Noncontrolling Interest

As the sole manager of Switch, Ltd., we operate and control all of the business and affairs of Switch, Ltd. and its subsidiaries. Although we have a minority economic interest in Switch, Ltd., we have the sole voting interest in, and control the management of, Switch, Ltd. Accordingly, we consolidate the financial results of Switch, Ltd. and report a noncontrolling interest on our consolidated statements of operations and comprehensive income (loss), representing the portion of net income or loss and comprehensive income or loss attributable to the noncontrolling interest. The weighted average ownership percentages during the period are used to calculate the net income or loss and other comprehensive income or loss attributable to Switch, Inc. and the noncontrolling interest.

Results of Operations

The following table sets forth our results of operations:

	Years Ended December 31,		
	2018	2017	2016
		(in thousands)	
Consolidated Statements of Operations Data[(1)]:			
Revenue	$ 405,860	$ 378,275	$ 318,352
Cost of revenue	224,413	198,230	168,844
Gross profit	181,447	180,045	149,508
Selling, general and administrative expense	126,768	160,569	71,420
Impact fee expense	—	649	27,018
Income from operations	54,679	18,827	51,070
Other income (expense):			
Interest expense, including amortization of debt issuance costs	(26,370)	(25,079)	(10,836)
Equity in net losses of investments	(331)	(1,077)	(10,138)
Loss on extinguishment of debt	—	(3,565)	—
Impairment of notes receivable	—	—	(2,371)
Gain on lease termination	—	—	2,801
Other	3,283	1,333	842
Total other expense	(23,418)	(28,388)	(19,702)
Income (loss) before income taxes	31,261	(9,561)	31,368
Income tax (expense) benefit	(1,943)	981	—
Net income (loss)	29,318	(8,580)	31,368
Less: net income attributable to noncontrolling interest	25,266	6,628	—
Net income (loss) attributable to Switch, Inc.	$ 4,052	$ (15,208)	$ 31,368

(1) Switch, Ltd. and its subsidiaries is our predecessor for accounting purposes and, accordingly, amounts for the period from January 1, 2017 to October 10, 2017 and the year ended December 31, 2016 represent the historical consolidated operations of Switch, Ltd. and its subsidiaries.

The following table sets forth the consolidated statements of operations data presented as a percentage of revenue. Amounts may not sum due to rounding.

	Years Ended December 31,		
	2018	2017	2016
Consolidated Statements of Operations Data:			
Revenue	100 %	100 %	100 %
Cost of revenue	55	52	53
Gross profit	45	48	47
Selling, general and administrative expense	31	42	22
Impact fee expense	—	—	8
Income from operations	13	5	16
Other income (expense):			
Interest expense, including amortization of debt issuance costs	(6)	(7)	(3)
Equity in net losses of investments	—	—	(3)
Loss on extinguishment of debt	—	(1)	—
Impairment of notes receivable	—	—	(1)
Gain on lease termination	—	—	1
Other	1	—	—
Total other expense	(6)	(8)	(6)
Income (loss) before income taxes	8	(3)	10
Income tax (expense) benefit	—	—	—
Net income (loss)	7	(2)	10
Less: net income attributable to noncontrolling interest	6	2	—
Net income (loss) attributable to Switch, Inc.	1 %	(4)%	10 %

Comparison of the Years Ended December 31, 2018 and 2017

Revenue

	Years Ended December 31,		Change	
	2018	2017	Amount	%
	(dollars in thousands)			
Colocation	$ 324,209	$ 304,720	$ 19,489	6%
Connectivity	74,006	67,690	6,316	9%
Other	7,645	5,865	1,780	30%
Revenue	$ 405,860	$ 378,275	$ 27,585	7%

Revenue increased by $27.6 million, or 7%, for the year ended December 31, 2018, compared to the year ended December 31, 2017. The increase was primarily attributable to increases of $19.5 million in colocation revenue and $6.3 million in connectivity revenue, both of which resulted from an increased volume of sales to existing and new customers. Of the overall increase, 30% was attributable to new customers initiating service after December 31, 2017, and the remaining 70% was attributable to growth from existing customers. Our revenue churn rate, which we define as the reduction in recurring revenue attributable to customer terminations or non-renewal of expired contracts, divided by revenue at the beginning of the period, was 0.5% and 0.6% during the years ended December 31, 2018 and 2017, respectively.

Cost of Revenue and Gross Margin

	Years Ended December 31,		Change	
	2018	2017	Amount	%
	(dollars in thousands)			
Cost of revenue	$ 224,413	$ 198,230	$ 26,183	13%
Gross margin	44.7%	47.6%		

Cost of revenue increased by $26.2 million, or 13%, for the year ended December 31, 2018, compared to the year ended December 31, 2017. The increase was primarily attributable to increases of $16.0 million in depreciation and amortization expense due to additional property and equipment being placed into service, $6.1 million in facilities costs largely due to an increase in power and maintenance costs, and $2.3 million in connectivity costs associated with increased occupancy, largely resulting from the build-out and expansion of The Core Campus, The Citadel Campus and The Pyramid Campus. In addition, during the year ended December 31, 2018, we corrected an immaterial amount of $0.8 million in additional depreciation expense included in cost of revenue that should have been expensed during the periods from June 30, 2017 through December 31, 2017. For further information, see Note 2 “Summary of Significant Accounting Policies—Prior Period Adjustments” within our consolidated financial statements. Accordingly, gross margin decreased by 290 basis points for the year ended December 31, 2018, compared to the year ended December 31, 2017.

Selling, General and Administrative Expense

	Years Ended December 31,		Change	
	2018	2017	Amount	%
	(dollars in thousands)			
Selling, general and administrative expense	$ 126,768	$ 160,569	$ (33,801)	(21)%
Impact fee expense	—	649	(649)	(100)%
Total operating expenses	$ 126,768	$ 161,218	$ (34,450)	(21)%

Selling, general and administrative expense decreased by $33.8 million, or 21%, for the year ended December 31, 2018, compared to the year ended December 31, 2017. The decrease was primarily attributable to a decrease of $49.2 million related to non-cash compensation expense primarily due to the accelerated vesting of certain incentive units upon our IPO and awards granted under the 2017 Incentive Award Plan during the year ended December 31, 2017, partially offset by increases of $8.1 million in marketing expense and professional fees for consulting, legal and accounting services, $4.1 million in salaries and related expense due to an increase in headcount, $1.1 million in real and personal property taxes, $0.8 million in insurance expense, $0.7 million in depreciation and amortization expense, and $0.5 million in commissions paid to partners.

Impact Fee Expense

During the year ended December 31, 2017, we incurred $0.6 million related to deferred energy adjustments representing the difference between actual costs and amounts collected by NV Energy for fuel and purchased power as a result of becoming an unbundled purchaser of energy, capacity and ancillary services from a new provider of electric resources in Nevada. No impact fee expense was incurred for the year ended December 31, 2018.

Other Income (Expense)

	Years Ended December 31,		Change	
	2018	2017	Amount	%
	(dollars in thousands)			
Other income (expense):				
Interest expense	$ (26,370)	$ (25,079)	$ (1,291)	5 %
Equity in net losses of investments	(331)	(1,077)	746	(69)%
Loss on extinguishment of debt	—	(3,565)	3,565	(100)%
Other	3,283	1,333	1,950	146 %
Total other expense	$ (23,418)	$ (28,388)	$ 4,970	(18)%

Interest Expense

Interest expense increased by $1.3 million, or 5%, for the year ended December 31, 2018, compared to the year ended December 31, 2017. The increase was driven primarily by an increase in our weighted average interest rate from 3.73% for the year ended December 31, 2017 to 4.23% for the year ended December 31, 2018, related to our LIBOR-based borrowings. In addition, during the year ended December 31, 2018, we corrected an immaterial amount of $0.4 million in additional interest expense that should have been expensed during the periods from June 30, 2017 through December 31, 2017. For further information, see Note 2 “Summary of Significant Accounting Policies—Prior Period Adjustments” within our consolidated financial statements.

Equity in Net Losses of Investments

Equity in net losses of investments related to our equity method investments in SUPERNAP International decreased by $0.7 million, or 69%, for the year ended December 31, 2018, compared to the year ended December 31, 2017. The net losses for these periods are related to the financial performance of our equity method investment in SUPERNAP International. As the carrying value of our investment in SUPERNAP International was reduced to zero as a result of recording our share of its losses as of March 31, 2018, we discontinued the equity method of accounting and will not provide for additional losses until our share of future net income, if any, equals the share of net losses not recognized during the period the equity method was suspended.

Loss on Extinguishment of Debt

Loss on extinguishment of debt was $3.6 million for the year ended December 31, 2017 related to the refinancing of our prior credit agreement in June 2017. There was no such extinguishment of debt during the year ended December 31, 2018.

Other

Other income increased by $2.0 million, or 146%, for the year ended December 31, 2018, compared to the year ended December 31, 2017 due to an increase in interest income earned on our cash equivalents.

Income Tax (Expense) Benefit

	Years Ended December 31,		Change	
	2018	2017	Amount	%
	(dollars in thousands)			
Income tax (expense) benefit	$ (1,943)	$ 981	$ (2,924)	NM

NM - Not meaningful

During the year ended December 31, 2018, we incurred $1.9 million of income tax expense compared to $1.0 million of income tax benefit during the year ended December 31, 2017. The income tax expense and benefit are driven by our allocable share of Switch, Ltd.’s income and loss before income taxes, respectively. As a partnership, Switch, Ltd. is not subject to U.S. federal and certain state and local income taxes; therefore, as the IPO and certain organizational transactions in connection with our IPO were not completed until October 2017, there was no provision or benefit for income taxes for the period from January 1, 2017 to October 10, 2017.

Net Income Attributable to Noncontrolling Interest

	Years Ended December 31, 2018	Years Ended December 31, 2017	Change Amount	Change %
	(dollars in thousands)			
Net income attributable to noncontrolling interest	$ 25,266	$ 6,628	$ 18,638	281%

Net income attributable to noncontrolling interest increased by $18.6 million, or 281% for the year ended December 31, 2018, compared to the year ended December 31, 2017 due to an increase in net income.

Comparison of the Years Ended December 31, 2017 and 2016

Revenue

	Years Ended December 31, 2017	Years Ended December 31, 2016	Change Amount	Change %
	(dollars in thousands)			
Colocation	$ 304,720	$ 259,046	$ 45,674	18%
Connectivity	67,690	53,715	13,975	26%
Other	5,865	5,591	274	5%
Revenue	$ 378,275	$ 318,352	$ 59,923	19%

Revenue increased by $59.9 million, or 19%, for the year ended December 31, 2017, compared to the year ended December 31, 2016. The increase was primarily attributable to increases of $45.7 million in colocation revenue and $14.0 million in connectivity revenue, both of which resulted from an increased volume of sales to existing customers along with the addition of new customers as we expanded the facilities in The Core Campus throughout 2016 and 2017 and opened the first facilities in The Pyramid Campus and The Citadel Campus in June 2016 and November 2016, respectively. Of the overall increase, 16% was attributable to new customers initiating service after December 31, 2016, and the remaining 84% was attributable to growth from existing customers. Our revenue churn rate was 0.6% and 1.1% during the years ended December 31, 2017 and 2016, respectively.

Cost of Revenue and Gross Margin

	Years Ended December 31, 2017	Years Ended December 31, 2016	Change Amount	Change %
	(dollars in thousands)			
Cost of revenue	$ 198,230	$ 168,844	$ 29,386	17%
Gross margin	47.6%	47.0%		

Cost of revenue increased by $29.4 million, or 17%, for the year ended December 31, 2017, compared to the year ended December 31, 2016. The increase was primarily attributable to increases of $20.9 million in depreciation and amortization costs, $2.9 million in connectivity costs and $1.4 million in facilities costs, such as maintenance costs, associated with increased occupancy from the buildout and expansion of The Core Campus, The Citadel Campus and The Pyramid Campus. In addition, salaries and related employee expenses increased by $4.6 million due to an increase in direct labor costs from an increase in headcount, partially offset by a decrease in rent expense of $0.5 million. Gross margin improved by 60 basis points for the year ended December 31, 2017, compared to the year ended December 31, 2016.

Selling, General and Administrative Expense

	Years Ended December 31,		Change	
	2017	2016	Amount	%
	(dollars in thousands)			
Selling, general and administrative expense	$ 160,569	$ 71,420	$ 89,149	125%

Selling, general and administrative expense increased by $89.1 million, or 125%, for the year ended December 31, 2017, compared to the year ended December 31, 2016. The increase was primarily attributable to increases of $77.7 million in equity-based compensation expense resulting primarily from the accelerated vesting of certain incentive units upon our IPO and awards granted under the 2017 Incentive Award Plan, $5.6 million in professional fees for legal and accounting services, and $5.4 million in salaries and related expenses predominantly due to an increase in headcount.

Impact Fee Expense

During the year ended December 31, 2016, we filed an application with the PUCN to become an unbundled purchaser of energy, capacity and ancillary services from a new provider of electric resources in Nevada, which was approved in December 2016, and incurred an impact fee expense of $27.0 million. During the year ended December 31, 2017, we incurred $0.6 million related to deferred energy adjustments representing the difference between actual costs and amounts collected by NV Energy for fuel and purchased power.

Other Income (Expense)

	Years Ended December 31,		Change	
	2017	2016	Amount	%
	(dollars in thousands)			
Other income (expense):				
Interest expense	$ (25,079)	$ (10,836)	$ (14,243)	131 %
Equity in net losses of investments	(1,077)	(10,138)	9,061	(89)%
Loss on extinguishment of debt	(3,565)	—	(3,565)	NM
Impairment of notes receivable	—	(2,371)	2,371	(100)%
Gain on lease termination	—	2,801	(2,801)	(100)%
Other	1,333	842	491	58 %
Total other expense	$ (28,388)	$ (19,702)	$ (8,686)	44 %

NM - Not meaningful

Interest Expense

Interest expense increased by $14.2 million to $25.1 million for the year ended December 31, 2017, compared to $10.8 million for the year ended December 31, 2016. The increase was primarily driven by increases in our outstanding weighted average long-term debt from $364.3 million for the year ended December 31, 2016 to $640.0 million for the year ended December 31, 2017 and in our weighted average interest rate from 2.37% for the year ended December 31, 2016 to 3.73% for the year ended December 31, 2017, related to our LIBOR-based borrowings.

Equity in Net Losses of Investments

Equity in net losses of investments related to our equity method investments in SUPERNAP International and Planet3 was $1.1 million for the year ended December 31, 2017, compared to $10.1 million for the year ended December 31, 2016. The net losses for these periods were related to the financial performance of our equity method investments in Planet3 and SUPERNAP International. In addition, in 2016, we recorded an impairment for the full carrying value of our investment in Planet3 of $4.4 million.

Loss on Extinguishment of Debt

Loss on extinguishment of debt of $3.6 million for the year ended December 31, 2017 related to the refinancing of our prior credit agreement in June 2017. There was no such extinguishment of debt during the year ended December 31, 2016.

Income Tax Benefit

	Years Ended December 31,		Change	
	2017	2016	Amount	%
	(dollars in thousands)			
Income tax benefit	$ 981	$ —	$ 981	NM

NM - Not meaningful

As a result of the IPO and certain organizational transactions completed in connection with our IPO, we became the sole manager of Switch, Ltd., which is treated as a partnership for U.S. federal and most applicable state and local income tax purposes. As a partnership, Switch, Ltd. is not subject to U.S. federal and certain state and local income taxes. Any taxable income or loss generated by Switch, Ltd. is passed through to, and included in the taxable income or loss of, its members, including us, on a pro rata basis. We are subject to U.S. federal income taxes, in addition to state and local income taxes with respect to our allocable share of any taxable income or loss generated by Switch, Ltd.

Net Income Attributable to Noncontrolling Interest

	Years Ended December 31,		Change	
	2017	2016	Amount	%
	(dollars in thousands)			
Net income attributable to noncontrolling interest	$ 6,628	$ —	$ 6,628	NM

NM - Not meaningful

As a result of the IPO and certain organizational transactions completed in connection with our IPO described within Note 1 “Organization” to our consolidated financial statements, the Members at December 31, 2017 became noncontrolling interest holders of Switch, Ltd. and owned 85.5% of the outstanding Common Units, with the remaining 14.5% owned by Switch, Inc. Net income from October 11, 2017 through December 31, 2017 was therefore attributed to noncontrolling interest holders based on the resulting ownership percentages. Further, as the IPO and certain organizational transactions completed in connection with our IPO occurred during the year ended December 31, 2017, there was no noncontrolling interest during the year ended December 31, 2016.

Liquidity and Capital Resources

Switch, Inc. is a holding company and has no material assets other than our ownership of Common Units. As such, we have no independent means of generating revenue or cash flow, and our ability to pay our taxes and operating expenses or declare and pay dividends in the future, if any, will be dependent upon the financial results and cash flows of Switch, Ltd. and its subsidiaries and any distributions we receive from Switch, Ltd. The terms of the amended and restated credit agreement limit the ability of Switch, Ltd., among other things, to incur additional debt, incur additional liens, encumbrances or contingent liabilities, and pay distributions or make certain other restricted payments.

As of December 31, 2018, we had $81.6 million of cash and cash equivalents. As of December 31, 2018, our total indebtedness was comprised of debt and financing obligations totaling $606.0 million consisting of (i) $586.6 million principal from our term loan facility (net of debt issuance costs) and (ii) $19.4 million from our capital lease obligations. As of December 31, 2018, we had access to $500.0 million in additional liquidity from our revolving credit facility. We believe we have sufficient cash and access to liquidity, coupled with anticipated cash generated from operating activities, to satisfy our anticipated cash needs for working capital and capital expenditures for at least the next 12 months, including repayment of the current portion of our debt as it becomes due and completion of our development projects.

In addition, with the completion of the IPO, we are obligated to make payments under the Tax Receivable Agreement we entered into with the Members. Although the actual timing and amount of any payments we make to the Members under the Tax Receivable Agreement will vary, we expect those payments will be significant. Any payments we make to Members under the Tax Receivable Agreement will generally reduce the amount of overall cash flow that might have otherwise been available to us or to Switch, Ltd. and, to the extent we are unable to make payments under the Tax Receivable Agreement for any reason, the unpaid amounts generally will be deferred and will accrue interest until paid by us.

In August 2018, our board of directors authorized a program by which Switch, Ltd. may repurchase up to $150.0 million of its outstanding Common Units for cash and Switch, Inc. will cancel a corresponding amount of Class B common shares. The program was effective immediately upon authorization. The authorization may be suspended or discontinued at any time without notice. Repurchases under the Common Unit repurchase program will be funded from our existing cash and cash equivalents. As of December 31, 2018, we had $89.4 million remaining in repurchase authority.

Cash Flows

The following table summarizes our cash flows:

	Years Ended December 31,		
	2018	2017	2016
	(in thousands)		
Net cash provided by operating activities	$ 178,330	$ 145,101	$ 166,065
Net cash used in investing activities	(278,095)	(402,451)	(292,001)
Net cash (used in) provided by financing activities	(83,341)	499,303	134,457
Net (decrease) increase in cash and cash equivalents	$ (183,106)	$ 241,953	$ 8,521

Cash Flows from Operating Activities

Cash from operating activities is primarily generated from operating income from our colocation and connectivity services.

Net cash provided by operating activities for the year ended December 31, 2018 was $178.3 million, compared to $145.1 million for the year ended December 31, 2017. The increase of $33.2 million was primarily due to the $27.0 million payment of the impact fee to become an unbundled purchaser of electric resources in Nevada to power our Nevada data center facilities in May 2017 and changes in our working capital accounts.

Net cash provided by operating activities for the year ended December 31, 2017 was $145.1 million, compared to $166.1 million for the year ended December 31, 2016. The decrease of $21.0 million was primarily due to the $27.0 million payment of the impact fee to become an unbundled purchaser of electric resources in Nevada to power our Nevada data center facilities in May 2017 and changes in our working capital accounts.

Cash Flows from Investing Activities

During the year ended December 31, 2018, net cash used in investing activities was $278.1 million, primarily consisting of capital expenditures of $275.5 million related to the expansion of our data center facilities and purchases of portfolio energy credits of $2.6 million.

During the year ended December 31, 2017, net cash used in investing activities was $402.5 million, primarily consisting of capital expenditures of $402.6 million related to the expansion of our data center facilities, partially offset by proceeds from sale of property and equipment of $0.1 million.

During the year ended December 31, 2016, net cash used in investing activities was $292.0 million, primarily consisting of capital expenditures of $287.1 million related to the expansion of our data center facilities, purchase of notes receivable of $3.0 million, and an equity method investment purchase of $1.5 million.

Cash Flows from Financing Activities

During the year ended December 31, 2018, net cash used in financing activities was $83.3 million, primarily consisting of $60.6 million for the repurchase of Common Units, distributions paid to noncontrolling interest of $11.6 million, repayments of borrowings outstanding under our term loan of $6.3 million, and dividends paid of $2.8 million.

During the year ended December 31, 2017, net cash provided by financing activities was $499.3 million, primarily consisting of $976.0 million in proceeds from borrowings on our credit facilities and $572.4 million in proceeds from

the issuance of common stock sold in our IPO, net of offering costs, partially offset by repayments of long-term debt, including capital lease obligations, of $855.0 million, distributions paid to Members/noncontrolling interest of $185.3 million, and payment of debt issuance costs of $9.0 million.

During the year ended December 31, 2016, net cash provided by financing activities was $134.5 million, primarily consisting of $189.0 million in proceeds from borrowings on our credit facilities, partially offset by distributions paid to Members of $28.1 million, repurchases of Member unit options of $15.1 million, and repayments of long-term debt of $10.0 million.

Outstanding Indebtedness

On June 27, 2017, we entered into an amended and restated credit agreement with Wells Fargo Bank, National Association, as administrative agent, and certain other lenders, consisting of a $600.0 million term loan facility, maturing on June 27, 2024, and a $500.0 million revolving credit facility, maturing on June 27, 2022, which replaced our prior credit facility. We refer to the term loan facility and the revolving credit facility as the credit facilities. We are required to repay the aggregate outstanding principal amount of the initial term loan in consecutive quarterly installments of $1.5 million, beginning on September 30, 2017, until the final payment of $559.5 million is made on the maturity date.

The amended and restated credit agreement permits the issuance of letters of credit upon Switch, Ltd.'s request of up to $30.0 million. As of December 31, 2018, we had no borrowings outstanding under the revolving credit facility and $500.0 million of availability. As of December 31, 2018, we had $586.6 million of borrowings outstanding under the term loan (net of deferred debt issuance costs) accruing interest at an underlying rate of 4.77%. Upon satisfying certain conditions, the amended and restated credit agreement provides that Switch, Ltd. can increase the amount available for borrowing under the credit facilities no more than five times (up to an additional $75.0 million in total, plus an additional amount subject to certain leverage restrictions) during the term of the amended and restated credit agreement.

The credit facilities are secured by a first priority security interest in substantially all of Switch, Ltd.'s tangible and intangible personal property and guaranteed by certain of its wholly-owned subsidiaries. Interest on the credit facilities is calculated based on the base rate plus the applicable margin or a LIBOR rate plus the applicable margin (each as defined in the amended and restated credit agreement), at Switch, Ltd.'s election. Interest calculations are based on 365/366 days for a base rate loan and 360 days for a LIBOR loan. Base rate interest payments are due and payable in arrears on the last day of each calendar quarter. LIBOR rate interest payments are due and payable on the last day of each selected interest period (not to extend beyond three-month intervals). In addition, under the revolving credit facility we incur a fee on unused lender commitments based on the applicable margin and payment is due and payable in arrears on the last day of each calendar quarter.

The credit agreement contains affirmative and negative covenants customary for such financings, including, but not limited to, limitations, subject to specified exceptions and baskets, on incurring additional debt, incurring additional liens, encumbrances or contingent liabilities, making investments in other persons or property, selling or disposing of its assets, merging with or acquiring other companies, liquidating or dissolving ourselves or any of the subsidiary guarantors, engaging in any business that is not otherwise a related line of business, engage in certain transactions with affiliates, paying dividends or making certain other restricted payments, and making loans, advances or guarantees. The terms of the credit agreement also require compliance with the consolidated total leverage ratio (as defined in the amended and restated credit agreement) starting with the fiscal quarter ended June 30, 2017. As of December 31, 2018, the maximum consolidated total leverage ratio was 5.25 to 1.00. The maximum consolidated total leverage ratio decreases over time to, and remains at, 4.00 to 1.00 for the quarters ending September 30, 2020 and thereafter through maturity. We were in compliance with this covenant as of December 31, 2018.

Events of default under the credit facilities, subject to specified thresholds, include but are not limited to: nonpayment of principal, interest, fees or any other payment obligations thereunder; failure to perform or observe covenants, conditions or agreements; material violation of any representation, warranty or certification; cross-defaults to certain material indebtedness; bankruptcy or insolvency of Switch Ltd.'s subsidiary guarantors; certain monetary judgments against the subsidiary guarantors; and any change of control occurrence.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements for any of the periods presented.

Contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2018:

	Payments Due by Period				
	Less than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years	Total
	(in thousands)				
Long-term debt, principal[(1)]	$ 6,000	$ 12,000	$ 12,000	$ 561,000	$ 591,000
Long-term debt, interest[(2)]	30,083	59,308	55,181	13,398	157,970
Capital lease obligations[(3)]	2,064	4,367	4,738	28,898	40,067
Operating leases[(4)]	7,306	12,244	5,131	55,226	79,907
Other contractual commitments[(5)]	48,909	9,406	3,475	24,104	85,894
Total	$ 94,362	$ 97,325	$ 80,525	$ 682,626	$ 954,838

(1) Represents principal payments only. We will pay interest on outstanding indebtedness based on the rates and terms summarized in Note 6 "Long-Term Debt" to our consolidated financial statements.

(2) Represents interest expected to be incurred on our long-term debt based on amounts outstanding and interest rates as of December 31, 2018 as summarized in Note 6 "Long-Term Debt" to our consolidated financial statements. Actual rates will vary.

(3) Represents principal and interest. See Note 7 "Leases" to our consolidated financial statements.

(4) Represents minimum operating lease payments, excluding potential lease renewals. See Note 7 "Leases" to our consolidated financial statements.

(5) Represents primarily construction-related purchase orders and power purchase and portfolio energy credit agreements for our data centers. See Note 9 "Commitments and Contingencies" to our consolidated financial statements.

As of December 31, 2018, we recorded a liability under the Tax Receivable Agreement of $52.5 million. No amounts are included in the table above as we are unable to reasonably estimate the timing of the payments of the liability; however, no amounts are expected to be paid within the next 12 months.

In January and February 2019, we entered into four interest rate swap agreements; whereby, we will pay a weighted average fixed interest rate (excluding the applicable interest margin) of 2.48% on notional amounts corresponding to borrowings of $400.0 million in exchange for receipts on the same notional amount at a variable interest rate based on the applicable LIBOR at the time of payment. The interest rate swap agreements mature in June 2024.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with GAAP. The preparation of these consolidated financial statements requires our management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses and related disclosures. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these judgments and estimates under different assumptions or conditions and any such differences may be material. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Revenue Recognition

We derive more than 95% of our revenue from recurring revenue, consisting primarily of (1) colocation, which includes the licensing and leasing of cabinet space and power; and (2) connectivity services. The remainder of our revenue is from non-recurring revenue, which primarily includes installation services related to a customer's initial deployment and contract settlements. We commence revenue recognition for our services when all of the following criteria are met:

- there is persuasive evidence of an arrangement;
- the service has been or is being provided to the customer;
- collection of the fees is reasonably assured; and
- the amount of fees to be paid by the customer is fixed or determinable.

Revenue from recurring revenue streams are generally billed monthly and recognized ratably over the period to which the service relates. Contracts with our customers generally have terms of three to five years. Non-recurring installation fees, although generally paid in a lump sum upon installation, are deferred and recognized ratably over the expected life of the installation. Revenue from connectivity services is recognized on a gross basis primarily because we act as the principal in the transactions, take title to services and bear credit risk. Revenue from contract

settlements, which result when a customer wishes to terminate their contract early, is recognized when no remaining performance obligations exist, to the extent that the revenue has not previously been recognized.

Multiple Element Arrangements

We enter into multiple element revenue arrangements in which a customer may purchase a combination of the right to use network capacity (e.g., conduit and fiber optic cables), maintenance services and colocation services. Terms of performance, cancellation, termination or refunds in these arrangements are similar to those for individual stand-alone deliverables. The services we offer under these revenue arrangements qualify as separate units of accounting. Multiple deliverables within revenue arrangements are allocated to separate units of accounting if the deliverables meet both of the following criteria:

- the delivered items have value to the customer on a stand-alone basis. The items have value on a stand-alone basis if they are sold separately by any vendor or the customer could resell the delivered items on a stand-alone basis; and
- if the arrangement includes a general right of return relative to the delivered items, delivery or performance of the undelivered items is considered probable and substantially in our control.

At the inception of a multiple element arrangement, we must: (1) determine whether and when each unit of accounting has been delivered or performed; (2) determine the fair value of each unit of accounting using the selling price hierarchy of vendor-specific evidence of fair value, or VSOE, third-party evidence, or TPE, or our best estimate of the selling price, or BESP; and (3) allocate the total price among the various units of accounting using the relative selling price method. Once the total price has been allocated among the various units of accounting, revenue is recognized on a monthly basis over the term of the agreement when the relevant revenue recognition criteria are met for each element, which is upon acceptance or use of the services by the customer. VSOE generally exists when the deliverable is sold separately; however, in certain instances VSOE cannot be established if the deliverable cannot be priced within a narrow range or has a limited sales history. When VSOE cannot be established, the selling price for each element is established based on TPE. TPE is determined based on competitor prices for similar deliverables when sold separately. When the selling price is not able to be established using VSOE or TPE, BESP is used in the allocation of arrangement consideration. BESP is our best estimate of the price at which a product or service would be sold if it were sold on a stand-alone basis. We determine BESP for a service by considering multiple factors including, but not limited to, pricing practices, market conditions, competitive landscape, type of customer, geographies, internal costs and gross margin objectives. Revenue is allocated to rights to use network capacity and related colocation services and maintenance services under these arrangements based on TPE. Revenue allocated to other colocation services provided under these arrangements is based on VSOE.

Equity-Based Compensation

Equity-based compensation for periods subsequent to our IPO includes stock options, restricted stock, restricted stock units and dividend equivalent units awarded to employees. We measure equity-based compensation expense at the grant date based on the fair value of the award and recognize the expense over the requisite service period, which is generally the vesting period. We use the straight-line method to recognize compensation expense for equity awards with service conditions and the accelerated attribution method for equity awards with performance conditions.

We estimate the fair value of stock options using the Black-Scholes option-pricing model, which utilizes various inputs and assumptions, some of which are subjective. Key inputs we use in applying the Black-Scholes option-pricing model are the stock price on the date of grant, expected stock price volatility, expected term of the award, risk-free interest rate, and expected dividend yield. We estimate expected volatility by using a weighted average of the historical volatility of our common stock and the historical volatilities of a peer group comprised of publicly-traded companies in the same industry. We estimate the expected term of stock option awards using the “simplified” method, whereby, the expected term equals the arithmetic average of the vesting term and the original contractual term of the stock option. The risk-free interest rate is based on United States Treasury zero-coupon issues with remaining terms similar to the expected term of the stock option awards at the time of grant. The expected dividend yield is based on our estimate of annual dividends expected to be paid at the time of grant. Our restricted stock and restricted stock unit awards are measured based on the fair market value of the underlying common stock on the date of grant.

Equity-based compensation for periods prior to our IPO includes incentive units and unit options awarded to employees and members. These equity awards generally had only a service condition and certain of these awards also had a performance condition. The service-based condition of those equity awards was satisfied over a period of up to five years. We estimated the fair value of these equity-based awards using the Black-Scholes option pricing model, which requires the input of highly complex and subjective variables.

Our assumptions were as follows:

- ***Expected volatility.*** As we had not been a public company and do not have a trading history for our member equity units, the expected price volatility of the member equity units was estimated by analyzing the volatility of companies in the same industry and selecting volatility within the range.
- ***Risk-free interest rate.*** The risk-free interest rate was based on United States Treasury zero-coupon issues with remaining terms similar to the expected term of the equity awards.
- ***Expected term.*** The expected term of the equity award was calculated by analyzing the historical exercise data and obtaining the weighted average of the holding period for the equity awards.
- ***Expected dividend yield.*** The expected dividend rate was determined at the grant date for each equity award. Because the underlying member equity units are not publicly traded, the fair value of the member equity units were estimated on each grant date by a board of managers of Switch, Ltd. for historical periods prior to our IPO. In order to determine the fair value of the member equity units, the board of managers considered, among other things, contemporaneous valuations of the member equity units prepared by an unrelated third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. The board of managers exercised reasonable judgment and considered several objective and subjective factors to determine the best estimate of the fair value of our member equity units including:
    - our historical and expected operating and financial performance;
    - current business conditions;
    - our stage of development and business strategy;
    - the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company given prevailing market conditions and the nature and history of our business;
    - market multiples of comparable companies in our industry;
    - the lack of an active public market for our equity units;
    - the market performance of comparable publicly traded peer companies; and
    - macroeconomic conditions.

In determining the fair value of the member equity units, we estimated the enterprise value of our business primarily using a weighted average approach of a combination of the following three methods: (i) publicly traded data center company multiples; (ii) data center precedent transaction multiples; and (iii) the discounted cash flow method based on our five-year forecast. The weighting of these three methods varied over time. Application of these approaches involved the use of estimates, judgment and assumptions that were highly complex and subjective, such as those regarding our expected future revenue, expenses and future cash flows, discount rates, market multiples, the selection of comparable companies and the probability of possible future events. Common Unit awards were measured based on the fair market value of the underlying unit on the date of grant.

We recorded equity-based compensation expense of $35.7 million, $84.8 million and $5.9 million for the years ended December 31, 2018, 2017, and 2016, respectively. The increase in equity-based compensation expense during the year ended December 31, 2017 related to the accelerated vesting of certain incentive units upon our IPO and fully vested awards granted under our 2017 Incentive Award Plan. We expect to continue to grant equity-based awards in the future, and, to the extent that we do, our equity-based compensation expense recognized in future periods will likely increase.

Income Taxes

We account for income taxes pursuant to the asset and liability method, which requires the recognition of deferred income tax assets and liabilities related to the expected future tax consequences arising from temporary differences between the carrying amounts and tax bases of assets and liabilities based on enacted statutory tax rates applicable to the periods in which the temporary differences are expected to reverse. Any effects of changes in income tax rates or laws are included in income tax expense in the period of enactment. We reduce the carrying amounts of deferred tax assets by a valuation allowance if, based on the evidence available, it is more likely than not that such assets will not be realized. In making the assessment under the more likely than not standard, appropriate consideration must be given to all positive and negative evidence related to the realization of the deferred tax assets. The assessment considers, among other matters, the nature, frequency and severity of current and cumulative losses, forecasts of future profitability, the duration of statutory carry forward periods by jurisdiction, our experience with loss carryforwards not expiring unutilized and all tax planning alternatives that may be

available. A valuation allowance is recognized if under applicable accounting standards we determine it is more likely than not that our deferred tax assets would not be realized.

Tax Receivable Agreement

In connection with our IPO, we entered into a Tax Receivable Agreement with Switch, Ltd. and the Members. In the event that such parties exchange any or all of their Common Units for Class A common stock, we are contractually committed to pay such holders 85% of the tax benefits realized by us as a result of such transactions. The timing and amount of aggregate payments due under the Tax Receivable Agreement are contingent upon the taxable income we generate each year and the tax rate then applicable. We recognize obligations under the Tax Receivable Agreement after concluding that it is probable that we would have sufficient future taxable income to utilize the related tax benefits. The projection of future taxable income involves significant judgment. Actual taxable income may differ from our estimates, which could significantly impact the liability under the Tax Receivable Agreement. If we determine in the future that we will not be able to fully utilize all or part of the related tax benefits, we would reduce the portion of the liability related to the tax benefits not expected to be utilized and record the offsetting benefit on our consolidated statements of operations and comprehensive income (loss).

JOBS Act Accounting Election

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our consolidated financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

Recent Accounting Pronouncements

See Note 2 “Summary of Significant Accounting Policies—Recent Accounting Pronouncements” to our consolidated financial statements for more information.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to financial market risks, primarily in interest rates related to our debt obligations.

Interest Rate Risk

Our primary exposure to market risk is interest rate risk associated with our long-term debt. We evaluate our exposure to market risk by monitoring interest rates in the marketplace. Borrowings under our amended and restated credit agreement as of December 31, 2018 and 2017 bear interest at a margin above LIBOR or base rate (each as defined in the amended and restated credit agreement) as selected by us. As of December 31, 2018, we had $591.0 million of outstanding borrowings under our credit facilities with an underlying interest rate of 4.77%. Based on our outstanding borrowings as of December 31, 2018, a hypothetical increase or decrease of 100 basis points in LIBOR would cause our annual interest cost to change by $5.9 million. As of December 31, 2017, we had $597.0 million of outstanding borrowings under our credit facilities with an underlying interest rate of 3.81%.

As of December 31, 2018, we had cash and cash equivalents of $81.6 million with cash equivalents of $53.3 million held in money market funds. A hypothetical increase or decrease of 100 basis points in the interest rate on our cash equivalents held in money market funds as of December 31, 2018 would cause our annual interest income to change by $0.5 million. As of December 31, 2017, we had cash and cash equivalents of $264.7 million with cash equivalents of $241.4 million held in money market funds.

From time to time, we may also enter into interest rate swaps to mitigate our exposure to interest rate risk. In January and February 2019, we entered into four interest rate swap agreements; whereby, we will pay a weighted average fixed interest rate (excluding the applicable interest margin) of 2.48% on notional amounts corresponding to borrowings of $400.0 million in exchange for receipts on the same notional amount at a variable interest rate based on the applicable LIBOR at the time of payment. The interest rate swap agreements mature in June 2024.

Item 8. Financial Statements and Supplementary Data.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Switch, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Switch, Inc. and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of operations and comprehensive income (loss), of stockholders'/members' equity, and of cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Las Vegas, Nevada
March 18, 2019

We have served as the Company's auditor since 2013.

Switch, Inc.
Consolidated Balance Sheets
(in thousands, except per share data)

	December 31, 2018	December 31, 2017
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 81,560	$ 264,666
Accounts receivable, net of allowance of $426 and $472, respectively	17,654	16,386
Prepaid expenses	6,781	5,037
Other current assets	2,332	2,101
Total current assets	108,327	288,190
Property and equipment, net	1,302,770	1,133,572
Long-term deposit	3,333	3,842
Deferred income taxes	28,550	981
Other assets	17,050	8,174
TOTAL ASSETS	$ 1,460,030	$ 1,434,759
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Long-term debt, current portion	$ 6,000	$ 6,000
Accounts payable	20,501	18,934
Accrued salaries and benefits	5,258	5,211
Accrued expenses	9,778	6,469
Accrued construction payables	12,729	7,052
Deferred revenue, current portion	10,800	11,482
Customer deposits	9,962	8,634
Capital lease obligations, current portion	—	2,309
Total current liabilities	75,028	66,091
Long-term debt, net	580,566	585,760
Capital lease obligations	19,466	19,466
Deferred revenue	22,260	19,382
Liabilities under tax receivable agreement	52,535	—
Other long-term liabilities	1,823	1,927
TOTAL LIABILITIES	751,678	692,626
Commitments and contingencies (Note 7 and Note 9)		
STOCKHOLDERS' EQUITY:		
Preferred stock, $0.001 par value per share, 10,000 shares authorized, none issued and outstanding	—	—
Class A common stock, $0.001 par value per share, 750,000 shares authorized, 55,218 and 35,938 shares issued and outstanding, respectively	55	36
Class B common stock, $0.001 par value per share, 300,000 shares authorized, 148,481 and 173,624 shares issued and outstanding, respectively	149	174
Class C common stock, $0.001 par value per share, 75,000 shares authorized, 42,945 shares issued and outstanding	43	43
Additional paid in capital	140,191	107,008
Retained earnings	2,693	1,602
Accumulated other comprehensive income	79	31
Total Switch, Inc. stockholders' equity	143,210	108,894
Noncontrolling interest	565,142	633,239
TOTAL STOCKHOLDERS' EQUITY	708,352	742,133
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 1,460,030	$ 1,434,759

The accompanying notes are an integral part of these consolidated financial statements.

Switch, Inc.
Consolidated Statements of Operations and Comprehensive Income (Loss)
(in thousands, except per share/unit data)

	Years Ended December 31,		
	2018	2017	2016
Revenue	$ 405,860	$ 378,275	$ 318,352
Cost of revenue	224,413	198,230	168,844
Gross profit	181,447	180,045	149,508
Selling, general and administrative expense	126,768	160,569	71,420
Impact fee expense	—	649	27,018
Income from operations	54,679	18,827	51,070
Other income (expense):			
Interest expense, including $1,636, $1,303, and $922, respectively, in amortization of debt issuance costs	(26,370)	(25,079)	(10,836)
Equity in net losses of investments	(331)	(1,077)	(10,138)
Loss on extinguishment of debt	—	(3,565)	—
Impairment of notes receivable	—	—	(2,371)
Gain on lease termination	—	—	2,801
Other	3,283	1,333	842
Total other expense	(23,418)	(28,388)	(19,702)
Income (loss) before income taxes	31,261	(9,561)	31,368
Income tax (expense) benefit	(1,943)	981	—
Net income (loss)	29,318	(8,580)	31,368
Less: net income attributable to noncontrolling interest	25,266	6,628	—
Net income (loss) attributable to Switch, Inc.	$ 4,052	$ (15,208)	$ 31,368
Net income (loss) per share/unit (Note 14):			
Basic	$ 0.09	$ (1.88)	$ 0.16
Diluted	$ 0.09	$ (1.88)	$ 0.15
Weighted average shares/units used in computing net income (loss) per share/unit (Note 14):			
Basic	45,682	8,074	199,047
Diluted	45,753	8,074	203,461
Other comprehensive income:			
Foreign currency translation adjustment, before and after tax	331	908	(86)
Comprehensive income (loss)	29,649	(7,672)	31,282
Less: comprehensive income attributable to noncontrolling interest	25,549	6,732	—
Comprehensive income (loss) attributable to Switch, Inc.	$ 4,100	$ (14,404)	$ 31,282

The accompanying notes are an integral part of these consolidated financial statements.

Switch, Inc.
Consolidated Statements of Stockholders'/Members' Equity
(in thousands)

		Switch, Inc. Stockholders' Equity										
		Class A Common Stock		Class B Common Stock		Class C Common Stock						
	Members' Equity	Shares	Amount	Shares	Amount	Shares	Amount	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Noncontrolling Interest	Total Stockholders' Equity
Balance— December 31, 2015	$285,301	—	$ —	—	$ —	—	$ —	$ —	$ —	$ (607)	$ —	$ 284,694
Net income	31,368	—	—	—	—	—	—	—	—	—	—	31,368
Distributions	(28,110)	—	—	—	—	—	—	—	—	—	—	(28,110)
Taxes paid on behalf of employees for unit option exercises	(290)	—	—	—	—	—	—	—	—	—	—	(290)
Net settlement of outstanding vested unit options	(744)	—	—	—	—	—	—	—	—	—	—	(744)
Issuance of membership units for net settlement	744	—	—	—	—	—	—	—	—	—	—	744
Repurchase of member options and units	(15,148)	—	—	—	—	—	—	—	—	—	—	(15,148)
Equity-based compensation expense	4,969	—	—	—	—	—	—	—	—	—	—	4,969
Common units awarded	966	—	—	—	—	—	—	—	—	—	—	966
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	(86)	—	(86)
Balance— December 31, 2016	279,056	—	—	—	—	—	—	—	—	(693)	—	278,363
Activity prior to the initial public offering and related organizational transactions:												
Net loss	(17,313)	—	—	—	—	—	—	—	—	—	—	(17,313)
Distributions to members	(174,235)	—	—	—	—	—	—	—	—	—	—	(174,235)
Equity-based compensation expense	75,110	—	—	—	—	—	—	—	—	—	—	75,110
Common units awarded	1,115	—	—	—	—	—	—	—	—	—	—	1,115
Issuance of membership units upon exercise of unit options	161	—	—	—	—	—	—	—	—	—	—	161
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	786	—	786
Effects of the initial public offering and related organizational transactions:												
Effects of the reorganization transactions	(163,894)	—	—	—	—	—	—	163,894	—	—	—	—
Issuance of Class A common stock												

in the initial public offering, net of underwriting discount and offering costs	—	35,938	36	—	—	—	—	572,396	—	—	—	572,432
Issuance of Class B common stock	—	—	—	173,624	174	—	—	(174)	—	—	—	—
Issuance of Class C common stock	—	—	—	—	—	42,945	43	(43)	—	—	—	—

		Switch, Inc. Stockholders' Equity										
		Class A Common Stock		Class B Common Stock		Class C Common Stock						
	Members' Equity	Shares	Amount	Shares	Amount	Shares	Amount	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Noncontrolling Interest	Total Stockholders' Equity
Allocation of equity to noncontrolling interest in Switch, Ltd.	—	—	—	—	—	—	—	(629,507)	—	(80)	629,587	—
Activity subsequent to the initial public offering and related organizational transactions:												
Net income	—	—	—	—	—	—	—	—	2,105	—	6,628	8,733
Distributions to noncontrolling interest	—	—	—	—	—	—	—	—	—	—	(11,203)	(11,203)
Dividends declared	—	—	—	—	—	—	—	—	(503)	—	—	(503)
Equity-based compensation expense	—	—	—	—	—	—	—	442	—	—	8,123	8,565
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	18	104	122
Balance—December 31, 2017	—	35,938	36	173,624	174	42,945	43	107,008	1,602	31	633,239	742,133
Net income	—	—	—	—	—	—	—	—	4,052	—	25,266	29,318
Distributions to noncontrolling interest	—	—	—	—	—	—	—	—	—	—	(11,617)	(11,617)
Dividends declared	—	—	—	—	—	—	—	—	(2,961)	—	—	(2,961)
Equity-based compensation expense	—	—	—	—	—	—	—	13,057	—	—	22,676	35,733
Issuance of Class A common stock upon settlement of restricted stock unit awards, net of shares withheld for tax	—	131	—	—	—	—	—	(1,232)	—	—	—	(1,232)
Issuance of restricted stock awards	—	61	—	—	—	—	—	—	—	—	—	—
Exchanges of noncontrolling interest for Class A common stock	—	19,088	19	(19,088)	(19)	—	—	53,403	—	—	(53,403)	—
Repurchase of common units and cancellation of Class B common stock	—	—	—	(6,055)	(6)	—	—	(9,085)	—	—	(51,553)	(60,644)
Recognition of tax receivable agreement liability resulting from exchanges of noncontrolling interest for												

Class A common stock	—	—	—	—	—	—	—	(52,535)	—	—	—	(52,535)
Net deferred tax assets resulting from exchanges of noncontrolling interest for Class A common stock	—	—	—	—	—	—	—	29,512	—	—	—	29,512
Settlement of unit option loans	—	—	—	—	—	—	—	63	—	—	251	314
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	48	283	331
Balance—December 31, 2018	$ —	55,218	$ 55	148,481	$ 149	42,945	$ 43	$140,191	$ 2,693	$ 79	$ 565,142	$ 708,352

The accompanying notes are an integral part of these consolidated financial statements.

Switch, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Years Ended December 31,		
	2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income (loss)	$ 29,318	$ (8,580)	$ 31,368
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization of property and equipment	106,666	89,124	66,591
Loss on disposal of property and equipment	1,206	569	1,994
Deferred income taxes	1,943	(981)	—
Amortization of debt issuance costs	1,636	1,303	922
Bad debt expense	207	423	383
Loss on extinguishment of debt	—	2,065	—
Equity in net losses of investments	331	1,077	5,764
Equity-based compensation	35,733	84,790	5,935
Amortization of portfolio energy credits	2,467	169	872
Amortization of notes receivable discount	—	—	(267)
Impairment of equity method investment	—	—	7,696
Changes in operating assets and liabilities:			
Accounts receivable	(187)	(6,435)	(1,101)
Prepaid expenses	(1,744)	(1,116)	187
Other current assets	(231)	(261)	(122)
Other assets	(5,353)	(1,221)	(463)
Accounts payable	(312)	5,079	(238)
Accrued salaries and benefits	47	991	3,144
Accrued expenses	3,309	(2,435)	4,353
Accrued impact fee expense	—	(27,018)	27,018
Deferred revenue	2,196	6,006	10,605
Customer deposits	1,328	1,695	1,360
Other long-term liabilities	(230)	(143)	64
Net cash provided by operating activities	178,330	145,101	166,065
CASH FLOWS FROM INVESTING ACTIVITIES:			
Acquisition of property and equipment	(275,524)	(402,561)	(287,097)
Proceeds from sale of property and equipment	62	100	—
Acquisition of intangible asset	(25)	(32)	—
Purchase of portfolio energy credits	(2,608)	(169)	(872)
Proceeds from notes receivable	—	211	468
Purchase of notes receivable	—	—	(3,000)
Purchase of equity method investment	—	—	(1,500)
Net cash used in investing activities	(278,095)	(402,451)	(292,001)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from borrowings	—	976,000	189,000
Repayment of borrowings, including capital lease obligations	(6,333)	(854,991)	(10,000)
Payment of debt issuance costs	—	(8,968)	(1,005)
Change in long-term deposit	(996)	598	—
Proceeds from issuance of Class A common stock, net of offering costs	—	572,432	—
Payment of tax withholdings upon settlement of restricted stock unit awards	(1,232)	—	—
Dividends paid to Class A common stockholders	(2,835)	(503)	—
Distributions paid to noncontrolling interest/members	(11,615)	(185,265)	(28,100)
Repurchase of common units	(60,644)	—	—
Settlement of unit option loans	314	—	—
Repurchase of unit options	—	—	(15,148)
Taxes paid on behalf of employees for unit option exercises	—	—	(290)
Net cash (used in) provided by financing activities	(83,341)	499,303	134,457

NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(183,106)	241,953	8,521
CASH AND CASH EQUIVALENTS—Beginning of year	264,666	22,713	14,192
CASH AND CASH EQUIVALENTS—End of year	$ 81,560	$ 264,666	$ 22,713

Switch, Inc.
Consolidated Statements of Cash Flows (Continued)
(in thousands)

	Years Ended December 31,		
	2018	2017	2016
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Cash paid for interest, net of amounts capitalized	$ 24,841	$ 23,494	$ 8,415
SUPPLEMENTAL DISCLOSURES OF NON-CASH INVESTING AND FINANCING INFORMATION:			
Increase (decrease) in liabilities incurred to acquire property and equipment	$ 8,807	$ (53,455)	$ 51,413
(Settlement of) liability incurred upon acquisition of capital lease asset	$ (1,976)	$ —	$ 4,000
Increase in accounts receivable related to refund of long-term deposit	$ 2,543	$ —	$ —
Dividends payable on unvested restricted stock units	$ 126	$ —	$ —
Distributions used for payment of unit option loans and related interest	$ 2	$ 173	$ 10
Decrease in noncontrolling interest as a result of exchanges for Class A common stock	$ (53,403)	$ —	$ —
Recognition of liabilities under tax receivable agreement	$ 52,535	$ —	$ —
Increase in deferred tax asset as a result of exchanges for Class A common stock	$ 29,512	$ —	$ —
Distributions declared but not paid	$ —	$ 152	$ 757
Net settlement of outstanding vested unit options	$ —	$ —	$ 744
Forgiveness of note receivable in exchange for capital lease asset	$ —	$ —	$ 2,100

The accompanying notes are an integral part of these consolidated financial statements.

Switch, Inc.
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1. Organization

Switch, Inc. was formed as a Nevada corporation in June 2017 for the purpose of completing an initial public offering (“IPO”) and related organizational transactions in order to carry on the business of Switch, Ltd. and its subsidiaries (collectively, “Switch,” and together with Switch, Inc., the “Company”). Switch is comprised of limited liability companies that provide colocation space and related services to global enterprises, financial companies, government agencies, and others that conduct critical business on the internet. Switch develops and operates data centers in Nevada, which are Tier IV Gold certified, and Michigan, and is developing data centers in Georgia, delivering redundant services with low latency and super capacity transport environments. As the manager of Switch, Ltd., Switch, Inc. operates and controls all of the business and affairs of Switch.

On October 11, 2017, Switch, Inc. completed its IPO of 35.9 million shares of its Class A common stock at a public offering price of $17.00 per share, which included 4.7 million shares of Class A common stock pursuant to the underwriters’ option to acquire additional shares of Class A common stock. Switch, Inc. received approximately $577.3 million in proceeds, net of underwriting discounts and commissions and before offering expenses of $4.9 million. Switch, Inc. used the proceeds to purchase 35.9 million newly issued common units of Switch, Ltd. (“Common Units”), at a price per Common Unit equal to the IPO price per share of Class A common stock, less underwriting discounts and commissions. As a result of the IPO, Rob Roy, the Founder, Chief Executive Officer and Chairman of Switch, Ltd., and an affiliated entity of Mr. Roy (collectively, the “Founder Members”) collectively controlled approximately 67.2% of the combined voting power of Switch, Inc.’s common stock at the closing of the IPO, and owned 67.9% as of December 31, 2018, as a result of their ownership of Switch, Inc.’s Class C common stock and Mr. Roy’s ownership of Class A common stock.

In connection with the closing of the IPO, Switch, Inc. and Switch, Ltd. consummated the following organizational transactions (the “Transactions”):

- Switch, Ltd. adopted and approved the Fifth Amended and Restated Operating Agreement of Switch, Ltd. (the “Switch Operating Agreement”), which amended and restated Switch, Ltd.’s prior operating agreement to, among other things, convert all incentive units in Switch, Ltd. into Common Units and to appoint Switch, Inc. as the sole manager of Switch, Ltd.;

- Switch, Inc. amended and restated its articles of incorporation to, among other things, provide for Class A common stock, Class B common stock, and Class C common stock;

- Switch, Inc. issued shares of its Class B common stock to the holders of Common Units other than Switch, Inc. and the Founder Members (the “Non-Founder Members” and, together with the Founder Members, the “Members”) on a one-to-one basis with the number of Common Units they owned, for nominal consideration, and shares of its Class C common stock to the Founder Members on a one-to-one basis with the number of Common Units they own, for nominal consideration;

- Switch, Inc. issued and sold 35.9 million shares of its Class A common stock in exchange for net proceeds of approximately $577.3 million, after deducting underwriting discounts and commissions but before offering expenses of $4.9 million;

- Switch, Inc. used all of the net proceeds from the IPO to acquire Common Units from Switch, Ltd. at a purchase price per Common Unit equal to the initial public offering price of Class A common stock, less underwriting discounts and commissions, collectively representing 14.5% of Switch, Ltd.’s outstanding Common Units at the closing of the IPO; and

- Switch, Inc. entered into (i) a Tax Receivable Agreement (“TRA”) with Switch, Ltd. and the Members and (ii) an Amended and Restated Registration Rights Agreement with the Members who, upon the completion of the IPO, owned an aggregate of 216.6 million shares of Switch, Inc.’s Class B common stock and Class C common stock, representing approximately 94.4% of the combined voting power of all of Switch, Inc.’s common stock at the closing of the IPO.

2. Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements are presented in accordance with accounting principles generally accepted in the United States of America ("GAAP") and include the accounts of the Company. All significant intercompany transactions and balances have been eliminated.

As the sole manager of Switch, Ltd., Switch, Inc. operates and controls all of the business and affairs of Switch, and has the sole voting interest in, and controls the management of, Switch, and has the obligation to absorb the losses of, and receive benefits from, Switch. Accordingly, Switch, Inc. identifies itself as the primary beneficiary of Switch and began consolidating Switch as of the closing date of the IPO, resulting in a noncontrolling interest related to the Common Units held by Members on its consolidated financial statements.

Switch has been determined to be the predecessor for accounting purposes and, accordingly, the consolidated financial statements for periods prior to the IPO and the Transactions have been adjusted to combine the previously separate entities for presentation purposes. Amounts for the period from January 1, 2017 through October 10, 2017, as of December 31, 2016, and for the year ended December 31, 2016 presented in the consolidated financial statements and notes to consolidated financial statements herein represent the historical operations of Switch. The amounts as of December 31, 2018 and 2017, for the period from October 11, 2017 through December 31, 2017, and for the year ended December 31, 2018 reflect the consolidated operations of the Company. For the period from June 13, 2017 to October 10, 2017, Switch, Inc. had no business transactions or activities and had no assets or liabilities with the exception of the issuance of one share at par value of $0.001 per share, which was canceled as of the closing date of the IPO.

The Company periodically evaluates entities for consolidation either through ownership of a majority voting interest, or through means other than voting interest, in accordance with the Variable Interest Entity ("VIE") accounting model. A VIE is an entity in which either (i) the equity investors as a group, if any, lack the power through voting or similar rights to direct the activities of such entity that most significantly impact such entity's economic performance or (ii) the equity investment at risk is insufficient to finance that entity's activities without additional subordinated financial support.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. On an ongoing basis, the Company evaluates its estimates, including, but not limited to, those related to the allowance for doubtful accounts, useful lives of property and equipment, deferred income taxes, liabilities under the TRA, equity-based compensation, deferred revenue, fair value of leased property at inception of lease term, fair value of deliverables under multiple element arrangements, and probability assessments of exercising renewal options on leases. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable. Actual results could differ from these estimates.

Cash and Cash Equivalents

The Company considers all highly liquid instruments with an original maturity of three months or less to be cash equivalents. Cash equivalents as of December 31, 2018 were comprised of money market funds totaling $53.3 million. Cash equivalents comprised of money market funds totaling $241.4 million were incorrectly classified as cash as of December 31, 2017.

Investments

The Company's investments in entities where it holds at least a 20% ownership interest and has the ability to exercise significant influence over, but not control, the investee are accounted for using the equity method of accounting. The Company's share of the investee's results of operations is included in equity in net losses of investments and foreign currency translation adjustment, as applicable, is included in other comprehensive income with a corresponding adjustment to its investment. The Company discontinues applying the equity method of accounting when the investment is reduced to zero. If the investee subsequently reports net income or other comprehensive income, the Company resumes applying the equity method of accounting only after its share of unrecognized net income and other comprehensive income, respectively, equals the share of losses not recognized during the period the equity method of accounting was suspended. The Company gives precedence to other comprehensive income and losses when determining whether to resume applying the equity method of accounting.

Investments in entities where the Company holds less than a 20% ownership interest are generally accounted for using the cost method of accounting.

Concentration of Credit and Other Risks

Although the Company operates primarily in Nevada, realization of its customer accounts receivable and its future operations and cash flows could be affected by adverse economic conditions, both regionally and elsewhere in the United States. During the years ended December 31, 2018, 2017, and 2016, the Company's largest customer and its affiliates comprised 11%, 11%, and 13%, respectively, of the Company's revenue. Only one customer accounted for 10% or more of accounts receivable as of December 31, 2018 and 2017.

The Company generally carries cash on deposit with financial institutions in excess of federally insured limits. Through May 31, 2017, the Company was also exposed to a limited extent, to a risk of unfavorable price increases from its principal provider of power, Nevada Power Company dba NV Energy ("NV Energy"), whose rates are set and services are regulated by the Public Utilities Commission of Nevada ("PUCN"). On June 1, 2017, the Company became an unbundled purchaser of energy in Nevada.

Accounts Receivable

Customer receivables are non-interest bearing and are initially recorded at cost. The Company generally does not request collateral from its customers; however, it usually obtains a lien or other security interest in certain customers' equipment placed in the Company's data center, and/or obtains a deposit. The Company maintains an allowance for doubtful accounts for estimated losses up to the full amount of invoices based on the age of the invoices. If the financial condition of the Company's customers were to deteriorate or if they became insolvent, resulting in an impairment of their ability to make payments, greater allowances for doubtful accounts may be required. Management specifically analyzes accounts receivable and current economic news and trends, historical bad debt, customer concentrations, customer credit-worthiness, and changes in customer payment terms when evaluating the adequacy of the Company's reserves. Delinquent account balances are written off after management has determined the likelihood of collection is not probable. The Company recorded bad debt expense of $0.2 million, $0.4 million, and $0.4 million during the years ended December 31, 2018, 2017, and 2016, respectively.

Leases

Upon lease inception, the Company categorizes leases as either operating or capital leases. On certain lease agreements, the Company may receive rent holidays and other incentives. The Company recognizes rent expense on a straight-line basis without regard to deferred payment terms, such as rent holidays, that defer the commencement date of required payments. For assets held under capital leases and leasehold improvements, the estimated useful lives are limited to the shorter of the useful life of the asset or the term of the lease, including renewal option periods if exercise is intended (Note 7). Amortization of assets that are recorded under capital leases is included in depreciation and amortization of property and equipment.

Property and Equipment

Property and equipment is stated at cost. Depreciation and amortization of property and equipment is computed using the straight-line method over the estimated useful lives of the respective assets. The cost and accumulated depreciation of property and equipment retired or otherwise disposed of are eliminated from the respective accounts and any resulting gain or loss is included in operations. Costs of repairs and maintenance are expensed as incurred. For assets used in data center operations, the related depreciation and amortization are included in cost of revenue.

The Company's estimated useful lives of its property and equipment are as follows (in years):

Assets	Estimated Useful Lives
Land improvements	20-30
Buildings, building improvements and leasehold improvements	3.5-40
Substation equipment	30
Data center equipment	5-10
Vehicles	7
Core network equipment	5-7
Cloud computing equipment	5
Fiber facilities	20, 25
Computer equipment, furniture and fixtures	3-5

The Company capitalizes certain costs incurred in connection with developing or obtaining internal use software. Capitalized software costs placed into service are included in computer equipment, furniture and fixtures and are amortized on a straight-line basis over a three-year period. Software costs that do not meet capitalization criteria are expensed immediately. The Company capitalized internal use software costs of $1.4 million, $1.8 million, and $1.3 million during the years ended December 31, 2018, 2017, and 2016, respectively.

In addition, the Company capitalizes interest costs during the construction phase of data centers. Once a data center or expansion project becomes operational, these costs are allocated to certain property and equipment categories and are depreciated over the estimated useful life of the underlying assets.

Impairment of Long-Lived Assets

The Company's long-lived assets, such as property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. Recoverability of assets to be held and used is measured by comparison of the carrying amount of an asset group to estimated undiscounted future cash flows expected to be generated by the asset group. If the carrying amount of an asset group exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset group exceeds the fair value of the asset group.

Portfolio Energy Credits

The Company records portfolio energy credits ("PECs") at their cost when purchased as an intangible asset, subject to impairment testing, within other assets on the consolidated balance sheets. PECs are not considered outputs by the Company. Amortization of PECs is recorded within cost of revenue on the consolidated statements of operations and comprehensive income (loss) when PECs are utilized in operations. A summary of the Company's PECs as of the end of each period presented is as follows:

	December 31,	
	2018	2017
	(in thousands)	
PECs, gross	$ 3,649	$ 1,042
Accumulated amortization	(3,508)	(1,042)
PECs, net	$ 141	$ —

Commitments and Contingencies

The Company accrues for commitments and contingencies when management, after considering the facts and circumstances of each matter as then known to management, has determined it is probable a liability has been incurred and the amount of the loss can be reasonably estimated. When only a range of amounts is reasonably estimable and no amount within the range is more likely than another, the low end of the range is recorded. Legal fees are expensed as incurred. Due to the inherent uncertainties surrounding gain contingencies, the Company does not recognize potential gains until realized.

Debt Issuance Costs

Costs incurred in obtaining certain debt financing are deferred and amortized over the terms of the related debt instruments using the straight line-method for both term debt, which approximates the interest method, and revolving debt. As of December 31, 2018 and 2017, unamortized debt issuance costs totaled $7.3 million and $9.0 million, respectively, of which $2.9 million and $3.8 million, respectively, were included within other assets on the consolidated balance sheets.

Deferred Offering Costs

The Company capitalized certain legal, accounting, and other third-party fees that were directly associated with in-process equity financings until such financings were consummated. After consummation of the equity financing, these costs were recorded in stockholders' equity as a reduction of additional paid in capital generated as a result of the offering. Upon the successful consummation of Switch, Inc.'s IPO in October 2017, deferred offering costs of approximately $4.9 million were recorded in the Company's stockholders' equity as a reduction of additional paid in capital during the year ended December 31, 2017. The Company did not record any deferred offering costs during the year ended December 31, 2018.

Foreign Currency Translation

SUPERNAP International, S.A. ("SUPERNAP International"), an equity method investment of the Company, has investments in foreign subsidiaries. The Company's share of gains or losses from translation of SUPERNAP International's foreign operations where the local currency is the functional currency is included in other comprehensive income.

Revenue Recognition

During each of the years ended December 31, 2018, 2017, and 2016, the Company derived more than 95% of its revenue from recurring revenue, consisting primarily of (1) colocation, which includes the licensing and leasing of cabinet space and power; and (2) connectivity services, which include cross-connects, broadband services, and external connectivity. The remainder of the Company's revenue is from non-recurring revenue, which primarily includes installation services related to a customer's initial deployment and contract settlements. Recurring revenue is generally billed monthly and recognized ratably over the period to which the service relates. The Company's contracts with its customers generally have terms of three to five years. Non-recurring installation fees, although generally paid in a lump sum upon installation, are deferred and recognized ratably over the expected life of the installation. The expected life of the installation is determined based on (i) the weighted average term of new contracts entered into during the period with customers, plus (ii) the average term of contract renewals entered into during the period with existing customers. Revenue from connectivity services is generally recognized on a gross basis in accordance with the accounting standard related to reporting revenue gross as a principal versus net as an agent, primarily because the Company acts as the principal in the transactions, takes title to services, and bears credit risk. Revenue from contract settlements, which results when a customer wishes to terminate their contract early, is generally recognized when no remaining performance obligations exist, to the extent that the revenue has not previously been recognized.

The Company guarantees certain service levels, such as uptime, as outlined in individual customer contracts. If these service levels are not achieved, the Company reduces revenue for any credits given to the customer as a result. There were no service level credits issued during the years ended December 31, 2018, 2017, and 2016.

Revenue is recognized only when the service has been provided and when there is persuasive evidence of an arrangement, the fee is fixed or determinable and collection of the receivable is reasonably assured. It is the Company's customary business practice to obtain a signed colocation facility agreement and service order prior to recognizing revenue in an arrangement. The Company assesses collectability of revenue based on a number of factors, including past transaction history with the customer and the credit-worthiness of the customer. If the Company determines that collection of a fee is not reasonably assured, the fee is deferred and revenue is recognized at the time collection becomes reasonably assured, which is generally upon receipt of cash.

Multiple Element Arrangements

The Company enters into multiple element revenue arrangements in which a customer may purchase a combination of the right to use network capacity (e.g., conduit and fiber optic cables), maintenance services, and colocation services. Terms of performance, cancellation, termination, or refunds in these arrangements are similar to those for individual stand-alone deliverables. To the extent these revenue arrangements involve the use of property and equipment, they are evaluated under lease accounting guidance to determine whether the arrangement meets the definition of a lease. None of the multiple element arrangements entered into by the Company during any of the periods presented have met the definition of a lease.

The services offered under these revenue arrangements qualify as separate units of accounting. Multiple deliverables within revenue arrangements are allocated to separate units of accounting if the deliverables meet both of the following criteria:

- The delivered items have value to the customer on a stand-alone basis. The items have value on a stand-alone basis if they are sold separately by any vendor or the customer could resell the delivered items on a stand-alone basis; and
- If the arrangement includes a general right of return relative to the delivered items, delivery or performance of the undelivered items is considered probable and substantially in the control of the Company.

At the inception of a multiple element arrangement, the Company: (1) determines whether and when each unit of accounting has been delivered or performed; (2) determines the fair value of each unit of accounting using the selling price hierarchy of vendor-specific evidence of fair value ("VSOE") if available, third-party evidence ("TPE") if VSOE is not available, and management's best estimate of the selling price ("BESP") if neither VSOE nor TPE is available; and (3) allocates the total price among the various units of accounting using the relative selling price

method. Once the total price has been allocated among the various units of accounting, revenue is recognized when the relevant revenue recognition criteria are met for each element, which is upon acceptance or use of the services by the customer. VSOE generally exists when the deliverable is sold separately; however, in certain instances VSOE cannot be established if the deliverable cannot be priced within a narrow range or has a limited sales history. TPE is determined based on competitor prices for similar deliverables when sold separately. The Company determines BESP for a product or service by considering multiple factors including, but not limited to, pricing practices, market conditions, competitive landscape, type of customer, geographies, internal costs, and gross margin objectives. Revenue is allocated to rights to use network capacity and related colocation services and maintenance services under these arrangements based on TPE. Revenue allocated to other colocation services provided under these arrangements is based on VSOE.

Income Taxes

Switch, Inc. is taxed as a corporation and incurs U.S. federal, state, and local income taxes on its allocable share of taxable income (loss) of Switch, Ltd. Switch, Ltd. operates as a partnership for federal, state, and local tax reporting. Members are liable for any income taxes resulting from their allocable portion of taxable income (loss) of Switch, Ltd. as a pass-through entity.

For tax years beginning on or after January 1, 2018, Switch, Ltd. is subject to partnership audit rules enacted as part of the Bipartisan Budget Act of 2015 (the “Centralized Partnership Audit Regime”). Under the Centralized Partnership Audit Regime, any audit of Switch, Ltd. by the Internal Revenue Service (“IRS”) would be conducted at the partnership level, and if the IRS determines an adjustment, the default rule is that the partnership would pay an “imputed underpayment” including interest and penalties, if applicable. Switch, Ltd. may instead elect to make a “push-out” election, in which case the partners for the year that is under audit would be required to take into account the adjustments on their own personal income tax returns. The Switch Operating Agreement does not stipulate how Switch, Ltd. will address imputed underpayments. If Switch, Ltd. receives an imputed underpayment, a determination will be made based on the relevant facts and circumstances that exist at that time.

The Company accounts for income taxes pursuant to the asset and liability method, which requires the recognition of deferred income tax assets and liabilities based on temporary differences between the carrying amounts and tax bases of assets and liabilities using enacted statutory tax rates applicable to the periods in which the temporary differences are expected to reverse. Any effects of changes in income tax rates or laws are included in income tax expense (benefit) in the period of enactment.

Deferred tax assets represent future tax deductions or credits. Realization of deferred tax assets ultimately depends on the existence of sufficient taxable income of the appropriate character in either the carryback or carryforward period. Each reporting period, the Company assesses the weight of all positive and negative evidence available and reduces the carrying amounts of deferred tax assets by a valuation allowance if it is more likely than not that such assets will not be realized. A comprehensive assessment of all forms of positive and negative evidence is performed on an annual basis and such assessment is updated during each interim period for significant changes.

The Company utilizes a two-step process to record uncertain income tax positions in which (1) the Company determines if the weight of available evidence indicates it is more likely than not that the tax position for recognition will be sustained on the basis of its technical merits and (2) for those tax positions meeting the more likely than not recognition threshold, the Company recognizes the largest amount of tax benefit that is more than 50% likely of being realized upon ultimate settlement with the related tax authority. The Company includes interest and penalties related to income taxes within the provision for income taxes. See Note 10 “Income Taxes” for additional information.

Tax Receivable Agreement

In connection with the IPO, the Company entered into a TRA with Switch, Ltd. and the Members. In the event that such parties exchange any or all of their Common Units for Class A common stock, the TRA requires the Company to make payments to such holders for 85% of the tax benefits realized, or in some cases deemed to realize, by the Company by such exchange as a result of (i) increases in the Company’s tax basis of its ownership interest in the net assets of Switch, Ltd. resulting from any redemptions or exchanges of noncontrolling interest, (ii) tax basis increases attributable to payments made under the TRA, and (iii) deductions attributable to imputed interest pursuant to the TRA (the "TRA Payments"). The annual tax benefits are computed by calculating the income taxes due, including such tax benefits, and the income taxes due without such benefits. The Company expects to benefit from the remaining 15% of any tax benefits that it may actually realize. The TRA Payments are not conditioned upon any continued ownership interest in Switch, Ltd. or the Company. The rights of each noncontrolling interest holder under the TRA are assignable to transferees of its interest.

The timing and amount of aggregate payments due under the TRA may vary based on a number of factors, including the amount and timing of the taxable income the Company generates each year and the tax rate then applicable. The payment obligations under the TRA are obligations of Switch, Inc. and not of Switch, Ltd. Payments are generally due under the TRA within a specified period of time following the filing of the Company's tax return for the taxable year with respect to which the payment obligation arises, although interest on such payments will begin to accrue at a rate of LIBOR plus 100 basis points from the due date (without extensions) of such tax return. Any late payments that may be made under the TRA will continue to accrue interest at LIBOR plus 500 basis points until such payments are subsequently made. See Note 10 "Income Taxes" for additional information.

Advertising Costs

Advertising costs are expensed when incurred and are included in selling, general and administrative expense in the accompanying consolidated statements of operations and comprehensive income (loss). Advertising expense was $1.1 million, $1.8 million, and $2.2 million during the years ended December 31, 2018, 2017, and 2016, respectively.

Equity-Based Compensation

Equity-based compensation cost is measured at the grant date for all equity-based awards made to employees based on the fair value of the awards and is attributed on a straight-line basis for awards with service conditions and on an accelerated attribution basis for awards with performance conditions over the requisite service period, which is generally the vesting period.

The Company used the Black-Scholes option-pricing model to determine the fair value of Switch, Ltd.'s incentive unit awards. The determination of the fair value of the incentive unit awards was affected by assumptions regarding a number of complex and subjective variables including the fair value of Switch, Ltd.'s member equity units, the expected price volatility of the member equity units over the term of the awards and actual and projected employee purchase behaviors. Switch, Ltd.'s member equity units' fair value per unit was estimated using a weighted average approach of a combination of the following three methods: (1) publicly traded data center company multiples; (2) data center precedent transaction multiples; and (3) the discounted cash flow method based on Switch, Ltd.'s five-year forecast. The weighting of these three methods varied over time. Switch, Ltd. estimated the expected volatility by analyzing the volatility of companies in the same industry and selecting volatility within the range. The risk-free interest rate was based on United States Treasury zero-coupon issues with remaining terms similar to the expected term of the incentive unit awards. The expected dividend rate was determined at the grant date for each incentive unit award. The expected term of the incentive unit award was calculated by analyzing historical exercise data and obtaining the weighted average of the holding period for the incentive unit awards. Common Unit awards were measured based on the fair market value of the underlying unit on the date of grant.

The Company uses the Black-Scholes option-pricing model to determine the fair value of Switch, Inc.'s stock option awards. Switch, Inc. estimates the expected volatility by using a weighted average of the historical volatility of its common stock and the historical volatilities of a peer group comprised of publicly-traded companies in the same industry. The risk-free interest rate is based on United States Treasury zero-coupon issues with remaining terms similar to the expected term of the stock option awards. The expected dividend rate is based on the Company's estimate of annual dividends expected to be paid at the time of grant. The expected term for stock options granted is estimated using the "simplified" method; whereby, the expected term equals the arithmetic average of the vesting term and the original contractual term of the stock option due to Switch, Inc.'s lack of sufficient historical data. Switch, Inc.'s restricted stock and restricted stock unit awards are measured based on the fair market value of the underlying common stock on the date of grant.

Net Income (Loss) per Share/Unit

Basic net income (loss) per share/unit is computed by dividing net income (loss) attributable to Switch, Inc. by the weighted average number of shares/units outstanding during the period. Diluted net income (loss) per share/unit is computed giving effect to all potential weighted average dilutive shares/units including unit options and incentive units for historical periods prior to the closing of the IPO and stock options, restricted stock units, dividend equivalent units, restricted stock awards, and Common Units convertible into shares of Class A common stock for the periods after the closing of the IPO. The dilutive effect of outstanding awards, if any, is reflected in diluted earnings per share/unit by application of the treasury stock method or if-converted method, as applicable. Refer to Note 14 for further information on net income (loss) per share/unit.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The accounting standards for fair value measurements

establishes a fair value hierarchy, which prioritizes the inputs used to measure fair value into three broad levels as follows:

Level 1 Quoted prices in active markets for identical assets or liabilities.

Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company has not elected to measure any financial assets or liabilities at fair value that are not required to be measured at fair value under GAAP.

Information about the Company's financial assets measured at fair value on a recurring basis is presented below:

	December 31, 2018			
	Carrying Value	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Cash equivalents	$ 53,293	$ 53,293	$ —	$ —

	December 31, 2017			
	Carrying Value	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Cash equivalents	$ 241,439	$ 241,439	$ —	$ —

Derivative Financial Instruments

A derivative is a financial instrument whose value changes in response to an underlying variable, requires little or no initial net investment, and is settled at a future date. Derivatives are initially recognized at fair value on the date on which the derivatives are entered into and subsequently re-measured at fair value.

Embedded derivatives included in hybrid instruments are treated and disclosed as separate derivatives when their economic characteristics and risks are not closely related to those of the host contract, the terms of the embedded derivative are the same as those of a stand-alone derivative and the combined contract is not measured at fair value through earnings. The financial host contracts are accounted for and measured using the applicable GAAP of the relevant financial instrument category.

The method of recognizing fair value gains and losses depends on whether the derivatives are designated as hedging instruments, and if so, the nature of the hedge relationship. All gains and losses from changes in the fair values of derivatives that do not qualify for hedge accounting are recognized immediately in earnings.

Beginning in 2017, the Company entered into agreements for the purchase of electricity (Note 9). The accounting guidance for derivative instruments provides a scope exception for commodity contracts that meet the normal purchases and normal sales criteria specified in the standard. The normal purchases and normal sales exception requires, among other things, physical delivery in quantities expected to be used or sold over a reasonable period in the normal course of business. Contracts that are designated as normal purchases and normal sales are not recorded on the consolidated balance sheets at fair value. Based on these requirements, the agreements entered into by the Company meet the normal purchases and normal sales scope exception criteria.

Recent Accounting Pronouncements

As the Company is an emerging growth company, it has elected not to opt out of the available extended transition period. Therefore, when a standard is issued or revised with different application dates for public or private companies, the Company, as an emerging growth company, is permitted to adopt the new or revised standard at the time private companies adopt the new or revised standard. As a result, adoption dates of Accounting Standards Updates herein are based on a private company timeline.

ASU 2014-09–Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASU 2014-09"). The standard supersedes much of the current guidance regarding revenue recognition including most industry-specific guidance. The core principle of the standard is to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. An entity will be required to identify the contract with a customer, identify the performance obligations in the contract, determine the transaction price, allocate the transaction price to the performance obligation in the contract, and recognize revenue when (or as) the entity satisfies a performance obligation. In addition to the new revenue recognition requirements, entities will be required to disclose sufficient information to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. The standard also provides guidance on the recognition of costs related to obtaining customer contracts. The standard allows for either full retrospective adoption, meaning the guidance is applied for all periods presented, or modified retrospective adoption, meaning the guidance is applied only to the most current period presented in the financial statements with the cumulative effect of initially applying the guidance recognized at the date of initial application. In August 2015, the FASB deferred the effective date by one year (ASU 2015-14) to December 15, 2018 for annual reporting periods beginning after that date, and interim periods within annual periods beginning after December 15, 2019, and permitted early adoption of the standard, but not before the original effective date of December 15, 2017.

In March 2016, the FASB issued ASU 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net) ("ASU 2016-08"). The core principle of the guidance in ASU 2014-09 is not changed by the amendments in ASU 2016-08. The amendments clarify the implementation guidance on principal versus agent considerations. Per ASU 2016-08, when another party is involved in providing goods or services to a customer, an entity is required to determine whether the nature of its promise is to provide the specified good or service itself (principal) or to arrange for that good or service to be provided by the other party (agent). When an entity that is a principal satisfies a performance obligation, the entity recognizes revenue in the gross amount of consideration to which it expects to be entitled in exchange for the specified good or service transferred to the customer. When an entity that is an agent satisfies a performance obligation, the entity recognizes revenue in the amount of any fee or commission to which it expects to be entitled. The effective date and transition requirements for ASU 2016-08 are the same as the effective date and transition requirements for ASU 2014-09.

In April 2016 and May 2016, the FASB issued guidance which amends certain other aspects of ASU 2014-09. The amendments include the identification of performance obligations and the licensing implementation guidance (ASU 2016-10) and the collectability of revenue, presentation of sales tax and other similar taxes collected from customers, contracts containing noncash considerations, and contract modifications and completed contracts at transition (ASU 2016-12). In December 2016, the FASB amended ASU 2014-09 to make minor corrections and minor improvements to the guidance that are not expected to have a significant effect on current accounting practice or create a significant administrative cost (ASU 2016-20). The effective date and transition provisions in these amendments are aligned with the requirements of ASU 2014-09.

The Company expects to adopt this guidance for the annual reporting period ending December 31, 2019 using the modified retrospective approach for adoption. The Company has assigned internal resources and engaged consulting service providers to assist in evaluating the impact the adoption of this guidance will have on its consolidated financial statements.

ASU 2016-02–Leases

On February 25, 2016, the FASB issued ASU 2016-02, Leases (Topic 842) ("ASU 2016-02"). The principle of ASU 2016-02 is that a lessee should recognize the assets and liabilities that arise from leases. Lessees will need to recognize a right-of-use asset and a lease liability for virtually all of their leases (other than leases that meet the definition of a short-term lease). The liability will be equal to the present value of lease payments. The asset will be based on the liability. For income statement purposes, ASU 2016-02 requires leases to be classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. Lessor accounting will remain largely unchanged, other than certain targeted improvements intended to align lessor accounting with the lessee accounting model and with the updated revenue recognition guidance. ASU 2016-02 is effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020, with early adoption permitted. In addition, in January 2018, the FASB issued ASU 2018-01, which permits an entity to elect an optional transition practical expedient to not evaluate land easements that exist or expired before the entity's adoption of ASU 2016-02 and were not previously accounted for as leases. In July 2018, the FASB issued ASU 2018-10, which provides clarifications and

improvements on sections of ASU 2016-02 and ASU 2018-11, which provides lessees the option to apply the new guidance to all open leases as of the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption and lessors with a practical expedient to account for qualifying non-lease components with associated lease components. In December 2018, the FASB also issued ASU 2018-20, which provides additional clarifications on sections of ASU 2016-02. The Company is evaluating the impact the adoption of this guidance will have on its consolidated financial statements. The Company expects to adopt this guidance for the annual reporting period ending December 31, 2020.

ASU 2016-13–Financial Instruments–Credit Losses

In June 2016, the FASB issued ASU 2016-13, Financial Instruments–Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). Under this guidance, a company will be required to use a new forward-looking "expected loss" model for trade and other receivables that generally will result in the earlier recognition of allowances for losses. The amendments in ASU 2016-13 are effective for fiscal years beginning after December 15, 2020, and interim periods within fiscal years beginning after December 15, 2021, and requires a modified-retrospective approach to adoption. Early adoption is permitted in fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is evaluating the impact the adoption of this guidance will have on its consolidated financial statements. The Company has not decided if early adoption will be considered.

ASU 2016-15–Statement of Cash Flows

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments ("ASU 2016-15"). The areas affected by ASU 2016-15 are debt prepayment and debt extinguishment costs, settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, proceeds from the settlement of corporate-owned life insurance policies (including bank-owned life insurance policies), distributions received from equity method investees, beneficial interests in securitization transactions, and separately identifiable cash flows and application of the predominance principle. Specifically, under this guidance, cash payments for debt prepayment or debt extinguishment costs will be classified as cash outflows for financing activities. The amendments in ASU 2016-15 are effective for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. The adoption of ASU 2016-15 is not expected to materially impact the Company's consolidated financial statements.

ASU 2017-09–Compensation–Stock Compensation

In May 2017, the FASB issued ASU 2017-09, Compensation–Stock Compensation (Topic 718): Scope of Modification Accounting ("ASU 2017-09"). This update provides clarity and reduces both diversity in practice and cost and complexity when applying the guidance in Topic 718, Compensation–Stock Compensation, to a change to the terms or conditions of a share-based payment award. The amendments in this update provide guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting. For all entities, the amendments in ASU 2017-09 are effective for annual and interim reporting periods beginning after December 15, 2017. The adoption of this guidance during the first quarter of 2018 did not impact the Company's consolidated financial statements.

ASU 2018-05–Income Taxes

In March 2018, the FASB issued ASU 2018-05, Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118 ("ASU 2018-05"). ASU 2018-05 provides guidance pursuant to Staff Accounting Bulletin No. 118 ("SAB 118"), in applying Accounting Standards Codification Topic 740 ("ASC 740") in connection with the Tax Cuts and Jobs Act (the "TCJA"). SAB 118 provides that in the period of enactment, the income tax effects of the TCJA may be reported as a provisional amount based on a reasonable estimate to the extent a reasonable estimate can be determined, which would be subject to adjustment during a "measurement period." The measurement period begins in the reporting period of the TCJA's enactment and ends when a registrant has obtained, prepared, and analyzed the information that was needed in order to complete the accounting requirements under ASC 740. SAB 118 also describes supplemental disclosures that should accompany the provisional amounts. The Company has applied this guidance as of December 31, 2017. Refer to Note 10 for further information on the financial accounting impacts of SAB 118.

ASU 2018-09–Codification Improvements

In July 2018, the FASB issued ASU 2018-09, Codification Improvements ("ASU 2018-09"). The amendments in this update make clarifications and minor improvements to the Accounting Standards Codification. Certain updates of ASU 2018-09 are applicable immediately while others are effective for annual periods beginning after December 15,

2018. The adoption of this guidance during the year ending December 31, 2018 did not materially impact the Company's consolidated financial statements.

ASU 2018-13–Fair Value Measurement

In August 2018, the FASB issued ASU 2018-13, Disclosure Framework–Changes to the Disclosure Requirements for Fair Value Measurement ("ASU 2018-13"). The amendments in this update modify the disclosure requirements for fair value measurements by removing, modifying, or adding certain disclosures. The amendments in ASU 2018-13 are effective for fiscal years beginning after December 15, 2019. Early adoption of this ASU is permitted, including adoption in any interim period. In addition, in November 2018, the FASB issued ASU 2018-19, which provides clarifications and improvements on sections of ASU 2018-13. The Company is evaluating the impact the adoption of this guidance will have on its consolidated financial statements. The Company has not decided if early adoption will be considered.

ASU 2018-15–Intangibles–Internal Use Software

In August 2018, the FASB issued ASU 2018-15, Intangibles–Goodwill and Other–Internal Use Software: Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract ("ASU 2018-15"). The amendments in this update align requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal use software (and hosting arrangements that include an internal use software license). The Company early adopted this guidance as of October 1, 2018 prospectively to implementation costs incurred after adoption. The early adoption of this guidance did not materially impact the Company's consolidated financial statements.

Reclassifications

Certain amounts in the accompanying consolidated balance sheets as of December 31, 2017 and consolidated statements of cash flows for the years ended December 31, 2017 and 2016 have been reclassified to be consistent with the current year presentation. These reclassifications were to (i) separately present deferred income taxes from other assets on the consolidated balance sheets, (ii) present all unamortized debt issuance costs as noncurrent within long-term debt, net on the consolidated balance sheets, and (iii) separately present amortization of PECs from changes in accounts payable on the consolidated statements of cash flows. The reclassifications had no impact on the Company's financial condition, results of operations, or net cash flows.

Prior Period Adjustments

During the three months ended September 30, 2018, the Company identified $15.0 million of property and equipment, which was included in construction in progress, that should have been placed in service during the three months ended June 30, 2017, at which time the Company should have begun depreciating the asset and ceased capitalizing interest. To correct for such errors in previously issued consolidated financial statements, during the three months ended September 30, 2018, the Company recognized $1.5 million of incremental depreciation expense in cost of revenue and $0.7 million of incremental interest expense, with $0.8 million and $0.4 million, respectively, representing out of period adjustments related to the year ended December 31, 2017. In addition, during the year ended December 31, 2018, the Company recorded additional immaterial out of period adjustments related to the year ended December 31, 2017 that resulted in a $0.3 million reduction in income before income taxes. Considering both quantitative and qualitative factors, the Company has determined the amounts were not material to any previously issued consolidated financial statements and are not material for the year ended December 31, 2018.

3. Property and Equipment, Net

Property and equipment, net consists of the following:

	December 31,	
	2018	2017
	(in thousands)	
Land and land improvements	$ 194,711	$ 151,286
Buildings, building improvements and leasehold improvements	412,089	338,763
Substation equipment	4,247	4,247
Data center equipment	904,722	763,790
Vehicles	1,685	1,573
Core network equipment	34,901	31,472
Cloud computing equipment	5,192	5,661
Fiber facilities	9,912	8,459
Computer equipment, furniture and fixtures	34,975	30,745
Deferred installation charges	—	4,436
Capitalized leased assets	33,730	35,974
Construction in progress	124,431	110,559
Property and equipment, gross	1,760,595	1,486,965
Less: accumulated depreciation and amortization	(457,825)	(353,393)
Property and equipment, net	$ 1,302,770	$ 1,133,572

Accumulated amortization for capitalized leased assets totaled $9.9 million and $8.3 million as of December 31, 2018 and 2017, respectively.

During the years ended December 31, 2018, 2017, and 2016, capitalized interest was $4.9 million, $2.9 million, and $2.7 million, respectively.

Total depreciation and amortization of property and equipment recognized on the consolidated statements of operations and comprehensive income (loss) was as follows:

	Years Ended December 31,		
	2018	2017	2016
	(in thousands)		
Cost of revenue	$ 104,095	$ 87,255	$ 66,062
Selling, general and administrative expense	2,571	1,869	529
Total depreciation and amortization of property and equipment	$ 106,666	$ 89,124	$ 66,591

4. Long-Term Deposit

In March 2015, NV Energy and Switch, Ltd. entered into a Substation Agreement and related land purchase agreement for land owned by a wholly-owned subsidiary of Switch, Ltd. Pursuant to the Substation Agreement, NV Energy designed, constructed, maintains, and owns a substation and related feeders in connection with service to Switch's development of three of its data center facilities in Las Vegas. The substation was placed into service in April 2016. Switch has paid the associated costs and associated tax gross-up related to the development of the substation and related feeders as defined in the Substation Agreement. These costs are subject to reimbursement based upon Switch's future power usage. Costs incurred as of December 31, 2018 totaled $3.3 million, of which $3.2 million is classified as long-term deposits and $0.1 million as property and equipment on the consolidated balance sheets. Costs incurred as of December 31, 2017 totaled $4.8 million, of which $3.8 million are classified as long-term deposits and $1.0 million as property and equipment on the consolidated balance sheets.

5. Equity Method Investments

The Company currently holds two investments accounted for under the equity method of accounting, SUPERNAP International and Planet3, Inc. ("Planet3"), in which the Company holds a 50% ownership interest and a 45% ownership interest, respectively. As of December 31, 2018 and 2017, the Company determined that it continued to have a variable interest in both SUPERNAP International and Planet3, as the entities do not have sufficient equity at

risk. However, the Company concluded that it is not the primary beneficiary of SUPERNAP International or of Planet3 as it does not have deemed control of either entity. As a result, it does not consolidate either entity into its consolidated financial statements.

As of December 31, 2018 and 2017, the Company had invested $1.3 million in SUPERNAP International. As of March 31, 2018, the Company's carrying value of its investment in SUPERNAP International was reduced to zero as a result of recording its share of the investee's losses. Accordingly, as the Company does not have any guaranteed obligations and is not otherwise committed to provide further financial support to SUPERNAP International, the Company discontinued the equity method of accounting for its investment in SUPERNAP International as of March 31, 2018 and will not provide for additional losses until its share of future net income or comprehensive income, if any, equals the share of net losses not recognized during the period the equity method was suspended. Losses recorded will continue to include the foreign currency translation adjustment in the Company's investment. The Company's share of net loss recorded during the years ended December 31, 2018, 2017, and 2016 amounted to $0.3 million, $1.1 million, and $2.1 million, respectively. As of December 31, 2018 and 2017, the Company recorded amounts consisting primarily of reimbursable expenses due from SUPERNAP International of $0.4 million and $0.3 million, respectively, within accounts receivable on the consolidated balance sheets.

As of December 31, 2018 and 2017, the Company had invested $10.0 million in Planet3. The Company's share of net loss recorded during the year ended December 31, 2016 was $3.7 million. During the year ended December 31, 2016, the Company determined an other than temporary loss in value of its investment in Planet3 had occurred due to Planet3's continued operating losses and the release of a beta product that did not generate the projected sales activity. As a result, the Company fully impaired the carrying values of its investment in Planet3 of $4.4 million, notes receivable of $2.4 million, net of a $0.6 million discount, and related embedded derivative of $0.9 million for a total write-down of $7.7 million during the year ended December 31, 2016. The estimated fair value of the Company's investment in Planet3 was based on Level 3 inputs, using a present value of future cash flow valuation technique that relied on management assumptions to derive an enterprise value. As the Company did not have any guaranteed obligations and was not otherwise committed to provide further financial support to Planet3, the Company discontinued the equity method of accounting for its investment in Planet3 as of December 31, 2016 and will not provide for additional losses until its share of future net income, if any, equals the share of net losses not recognized during the period the equity method was suspended.

The summarized financial information of the Company's equity method investments is as follows:

	December 31,	
	2018	2017
	(in thousands)	
Current assets	$ 2,334	$ 2,169
Noncurrent assets	$ 12,888	$ 17,075
Current liabilities	$ 3,128	$ 2,583
Noncurrent liabilities	$ 17,145	$ 19,445

	Years Ended December 31,		
	2018	2017	2016
	(in thousands)		
Revenue	$ 466	$ 700	$ 1,239
Gross loss	$ (1,558)	$ (3,467)	$ (2,313)
Net loss	$ (5,652)	$ (5,834)	$ (12,353)

6. Long-Term Debt

Long-term debt consists of the following as of:

	December 31,	
	2018	2017
	(in thousands)	
2017 Term Loan Facility	$ 591,000	$ 597,000
Less: unamortized debt issuance costs	(4,434)	(5,240)
	586,566	591,760
Less: long-term debt, current	(6,000)	(6,000)
Long-term debt, net	$ 580,566	$ 585,760

2015 Credit Agreement

In May 2015, Switch, Ltd. entered into a credit agreement ("2015 Credit Agreement") with Wells Fargo Bank, National Association, as administrative agent, and certain other lenders. The 2015 Credit Agreement consisted of a $200.0 million term loan facility and a $400.0 million revolving credit facility (the "2015 Facilities"), each with a term of five years.

Interest on the 2015 Facilities was calculated based on a base rate plus the applicable margin or a LIBOR rate plus the applicable margin, at Switch, Ltd.'s election. Interest calculations were based on 365/366 days for a base rate loan and 360 days for a LIBOR loan. Base rate interest payments were due and payable in arrears on the last day of each calendar quarter. LIBOR rate interest payments were due and payable on the last day of each selected interest period (not to extend beyond three-month intervals).

2017 Credit Agreement

In June 2017, Switch, Ltd. entered into an amended and restated credit agreement ("2017 Credit Agreement") with Wells Fargo Bank, National Association, as administrative agent, and certain other lenders, consisting of a $600.0 million term loan facility (the "2017 Term Loan Facility") and a $500.0 million revolving credit facility (the "2017 Revolving Credit Facility," and, together with the 2017 Term Loan Facility, the "2017 Facilities"), the proceeds of which were used to repay the outstanding balance of the 2015 Facilities. The Company recorded a $3.6 million loss on extinguishment of debt during the year ended December 31, 2017. In December 2017, Switch, Ltd. amended the 2017 Credit Agreement (the "First Amendment") to reduce the interest rate margin applicable to borrowings under the 2017 Facilities.

The 2017 Term Loan Facility matures in June 2024, and is subject to quarterly amortization payments of $1.5 million, which began on September 30, 2017, followed by a final payment of $559.5 million in June 2024. The 2017 Revolving Credit Facility has no interim amortization payments and matures in June 2022.

The 2017 Credit Agreement permits the issuance of letters of credit upon Switch, Ltd.'s request of up to $30.0 million. Upon satisfying certain conditions, the 2017 Credit Agreement provides that Switch, Ltd. can increase the amount available for borrowing under the 2017 Facilities no more than five times (up to an additional $75.0 million in total, plus an additional amount subject to certain leverage restrictions) during the term of the 2017 Credit Agreement. As of December 31, 2018, the Company had $500.0 million of available borrowing capacity under the 2017 Revolving Credit Facility, net of outstanding letters of credit.

The 2017 Facilities are collateralized by substantially all of Switch's tangible and intangible personal property and guaranteed by certain of Switch, Ltd.'s wholly-owned subsidiaries. Interest on the 2017 Facilities is calculated based on the base rate plus the applicable margin or a LIBOR rate plus the applicable margin, at Switch, Ltd.'s election. Interest calculations are based on 365/366 days for a base rate loan and 360 days for a LIBOR loan. Beginning on September 30, 2017, base rate interest payments are due and payable in arrears on the last day of each calendar quarter. LIBOR rate interest payments are due and payable on the last day of each selected interest period (not to extend beyond three-month intervals). As of December 31, 2018 and 2017, the underlying interest rate was 4.77% and 3.81%, respectively. In addition, beginning on September 30, 2017, the 2017 Revolving Credit Facility incurs a fee on unused lender commitments based on the applicable margin and payments are due and payable in arrears on the last day of each calendar quarter.

The 2017 Credit Agreement contains affirmative and negative covenants customary for such financings, including, but not limited to, limitations on incurring additional debt, incurring additional liens, encumbrances or contingent liabilities, and paying distributions or making certain other restricted payments (with certain exceptions and baskets, including a restricted payment basket of $15.0 million per fiscal year). The 2017 Credit Agreement also requires

Switch, Ltd. to maintain compliance with the consolidated total leverage ratio (as defined in the 2017 Credit Agreement) starting with the fiscal quarter ended June 30, 2017. As of December 31, 2018, the maximum consolidated total leverage ratio was 5.25 to 1.00. The maximum consolidated total leverage ratio decreases over time to, and remains at, 4.00 to 1.00 for the quarters ending September 30, 2020 and thereafter through maturity. Switch, Ltd. was in compliance with this covenant as of December 31, 2018.

Fair Value of Long-Term Debt

The estimated fair value of the Company's long-term debt as of December 31, 2018 and 2017, was approximately $573.3 million and $599.2 million, respectively, compared to its carrying value, excluding debt issuance costs, of $591.0 million and $597.0 million, respectively. The estimated fair value of the Company's long-term debt was based on Level 2 inputs.

As of December 31, 2018, long-term debt maturities are as follows (in thousands):

2019	$	6,000
2020		6,000
2021		6,000
2022		6,000
2023		6,000
Thereafter		561,000
		591,000
Less: unamortized debt issuance costs		(4,434)
	$	586,566

7. Leases

Capital Leases

The Company leases the land and building for one of its data centers from an entity in which a member of its Board of Directors has a beneficial ownership interest, under which the building portion of the lease has been capitalized. The lease attributable to the land is accounted for as an operating lease. The lease expires in 2033 with two subsequent 10-year and one five-year renewal option periods.

As of December 31, 2018, minimum payment obligations for this capital lease are as follows (in thousands):

2019	$	2,064
2020		2,124
2021		2,243
2022		2,306
2023		2,432
Thereafter		28,898
		40,067
Less: amount representing interest		(20,601)
Present value of minimum capital lease payments(1)	$	19,466

(1) Until 2023, capital lease payments are applied only to accrued interest; thus, there is no current portion.

In February 2016, a wholly-owned subsidiary of Switch, Ltd. acquired rights and interests to manage, construct and use the Nevada Broadband Telemedicine Initiative ("NBTI") fiber network. The right to use the NBTI fiber network is accounted for as a capital lease. As of December 31, 2018 and 2017, capital lease assets related to the NBTI fiber network, net of accumulated amortization, were $12.3 million and $15.2 million, respectively. During the year ended December 31, 2018, the Company entered into an agreement that reduced related future minimum payment obligations for this capital lease from $2.3 million to $0.3 million, for which payment was made prior to December 31, 2018. The capital lease expires 25 years from the date the network is accepted by the Nevada Hospital Association, the entity that holds title to the network, and has a 25-year renewal option. Acceptance occurred in September 2017.

The Company is the sole consumer of output from four feeders related to a substation owned by NV Energy (Note 4). The Company accounts for this arrangement as a capital lease. As of December 31, 2018 and 2017, capital

lease assets related to the feeders were $0.1 million and $0.5 million, respectively. There are no future minimum payment obligations related to this capital lease. The capital lease will expire 39 years from the date the substation was placed into service, which was April 2016.

In December 2018, the Company purchased a taxable industrial development revenue bond (the “Bond”) issued by a local government agency (the “Agency”) in order to reduce certain tax expenditures for data center facilities under construction. The Bond matures in December 2031. Pursuant to the terms of the Bond, the Company transferred title to certain of its property and equipment with total costs of $6.1 million as of December 31, 2018 to the Agency. The Company leases the property and equipment from the Agency subject to an option to purchase for nominal consideration, which the Company may exercise at any time, upon tendering the Bond to the Agency. The title to these assets will revert to the Company upon retirement or cancellation of the Bond. As the Company is both the bondholder and the lessee for the property and equipment, the Company exercised its right to offset the amounts invested in and the obligations for this Bond on the consolidated balance sheet. The underlying assets remain in property and equipment, net on the consolidated balance sheet as all risks and rewards remain with the Company.

Operating Leases

The Company leases land, warehouse storage space, and data center buildings under operating leases (including the land portion of the capitalized building lease) that have non-cancellable terms expiring through 2066 with entities in which a member of its Board of Directors has a beneficial ownership interest.

In addition, the Company leases warehouse storage space, storage yards for fiber, an aircraft, and construction materials and equipment under operating leases that have non-cancellable terms expiring through 2055.

As of December 31, 2018, future minimum lease payments for all operating leases with remaining terms in excess of one year are as follows:

	Related Parties	Other	Total
		(in thousands)	
2019	$ 4,824	$ 2,482	$ 7,306
2020	4,872	2,487	7,359
2021	4,260	625	4,885
2022	2,863	197	3,060
2023	2,051	20	2,071
Thereafter	54,603	623	55,226
	$ 73,473	$ 6,434	$ 79,907

During the years ended December 31, 2018, 2017, and 2016, rent expense related to operating leases was approximately $7.7 million, $7.4 million, and $8.7 million, respectively. Related party rent included in these amounts was approximately $5.0 million, $4.8 million, and $4.2 million during the years ended December 31, 2018, 2017, and 2016, respectively.

8. Retirement Benefit Plans

The Company has a defined contribution retirement plan that covers its eligible employees (the “Plan”). The Plan is qualified in accordance with Section 401(k) of the Internal Revenue Code (the “Code”). Eligible employees can participate in the Company’s pre-tax 401(k) plan or after-tax Roth 401(k) plan. Beginning in February 2016, the Company makes matching contributions equal to 100% of the first 3% of compensation deferred by a participant. The Company may make a discretionary additional matching contribution. The Company recognized expense related to its contributions to the Plan of $1.5 million, $1.3 million, and $0.9 million during the years ended December 31, 2018, 2017, and 2016, respectively.

9. Commitments and Contingencies

Purchase Commitments

In January 2018, a wholly-owned subsidiary of Switch, Ltd. entered into a Master Power Purchase & Sale Agreement of electricity with Tenaska Power Services Co. to purchase a firm commitment of 10 megawatts per energy hour for a term of 23 months, or a purchase commitment of $4.9 million during the term, which started February 1, 2018. Additionally, in September 2018, the Company increased its firm commitment by 10 megawatts per hour for a term of six months, or a total purchase commitment of $1.2 million during the additional term, which

started October 1, 2018. Scheduling services for the purchased power from these agreements are provided by Morgan Stanley Capital Group Inc., resulting in an additional purchase commitment of $0.4 million during the respective terms of the power purchase agreements, for a total purchase commitment of $6.5 million related to this agreement. As of December 31, 2018, the remaining total purchase commitment for 2019 is $3.4 million, with no additional commitments upon termination of the agreement thereafter.

In March 2017, the Company entered into a firm Power Purchase & Sale Agreement of electricity with Morgan Stanley Capital Group Inc. to purchase a minimum of 40 megawatts per energy hour for a term of 36 months, or a minimum purchase commitment of $33.4 million during the term, starting June 1, 2017. In addition, the agreement also contains a variable cost component for any megawatt hours in excess of the minimum megawatt hour commitment. The remaining minimum purchase commitment is $15.8 million as of December 31, 2018. Future minimum power purchase commitments for 2019 and 2020 are $11.1 million and $4.7 million, respectively, with no additional commitments upon termination of the agreement thereafter.

In September 2016, the Company entered into a take-or-pay contract with a lit fiber transport services vendor; whereby, the Company will be required to purchase a minimum of $0.1 million in eligible services on a monthly basis for a term equal to or greater than 24 months beginning 12 months after the eligible services are made available. The eligible services were made available in December 2017. The remaining minimum purchase commitment is $1.8 million as of December 31, 2018. Future minimum purchase commitments for 2019 and 2020 are $0.9 million and $0.9 million, with no additional commitments upon termination of the agreement thereafter.

PEC Purchase Commitments

In November 2015, the Company entered into a five-year contract beginning January 1, 2016 with the Southern Nevada Water Authority ("SNWA") to purchase an estimated 82 million PECs, or a minimum remaining purchase commitment of $0.3 million as of December 31, 2018, from the 14 megawatt solar photovoltaic generating plant constructed at SNWA's River Mountains Water Treatment Facility to meet its anticipated requirements under the state of Nevada's Renewal Portfolio Standard statute.

In November 2015, the Company entered into a renewable energy agreement with NV Energy to purchase all PECs realized from Switch Station 2, a 79 megawatt photovoltaic solar generation facility, for a minimum purchase commitment of $12.5 million during the remaining term as of December 31, 2018. The term of the renewable energy agreement is 20 years from the commercial operation date of Switch Station 2, which was in October 2017.

In June 2015, the Company entered into a renewable energy agreement with NV Energy to purchase all PECs realized from Switch Station 1, a 100 megawatt photovoltaic solar generation facility, not to exceed the Company's total electric load from its data center facilities, for a minimum purchase commitment of $20.3 million during the remaining term as of December 31, 2018. The term of the renewable energy agreement is 20 years from the commercial operation date of Switch Station 1, which was in August 2017.

As of December 31, 2018, future minimum PEC purchase commitments are as follows (in thousands):

2019	$	1,907
2020		1,907
2021		1,739
2022		1,739
2023		1,738
Thereafter		24,104
	$	33,134

Impact Fee Expense

On September 30, 2016, Switch filed its application with the PUCN to become an unbundled purchaser of energy, capacity, and ancillary services in Nevada from a new provider of electric resources. The application was approved on December 28, 2016 and Switch paid the impact fee of $27.0 million in a lump sum on May 31, 2017 to NV Energy, the Company's energy provider in Nevada through May 31, 2017, and became an unbundled purchaser of energy in Nevada on June 1, 2017. As there is no future economic benefit to the Company from the impact fee, it was recognized as an expense within impact fee expense during the year ended December 31, 2016 on the consolidated statements of operations and comprehensive income (loss). For the year ended December 31, 2017, the Company also incurred an additional $0.6 million in impact fee expense related to deferred energy adjustments representing the difference between actual costs and amounts collected by NV Energy for fuel and purchased power. Similarly, as no future economic benefit is realized by the Company from the deferred energy adjustments, it

was recognized as an expense during the year ended December 31, 2017 on the consolidated statements of operations and comprehensive income (loss).

Self-Insurance Reserves

Effective January 1, 2017, the Company is self-insured for various levels of employee health coverage. Insurance reserves include accruals for estimated settlements for known claims, as well as accruals for estimates of incurred but not reported claims. As of December 31, 2018 and 2017, the estimated liabilities for unpaid and incurred but not reported claims totaled $0.5 million and $0.4 million, respectively, which is included within accrued salaries and benefits on the consolidated balance sheets.

Legal Proceedings

On September 7, 2017, Switch, Ltd. and Switch, Inc. were named in a lawsuit filed in the U.S. District Court for the District of Nevada by V5 Technologies formerly d/b/a Cobalt Data Centers (now defunct). The lawsuit alleges, among other things, that Switch, Ltd. and Switch, Inc. monopolized the Las Vegas Metropolitan area of Southern Nevada's data center colocation market and engaged in unfair business practices leading to the failure of Cobalt Data Centers in 2015 and seeks monetary damages in an amount yet to be disclosed. Switch, Ltd. and Switch, Inc. are vigorously defending the case.

On September 12, 2017, Switch, Ltd. filed a complaint in the Eighth Judicial District of Nevada against the consultant, Stephen Fairfax, and his business, MTechnology Inc. Among other claims, Switch raised allegations of breach of contract and misappropriation of trade secrets. The complaint also alleged that Aligned Data Centers LLC hired Mr. Fairfax and MTechnology to design their data centers; that this consultant had toured Switch under a non-disclosure agreement; and that this consultant breached his confidentiality agreements with Switch by using Switch's designs to design the Aligned data centers. Switch, Ltd. is seeking an injunction to prevent the defendants in the lawsuit from infringing Switch, Ltd.'s patents, as well as other remedies.

Four substantially similar putative class action complaints, captioned Martz v. Switch, Inc. et al. (filed April 20, 2018); Palkon v. Switch, Inc. et al. (filed April 30, 2018); Chun v. Switch, Inc. et al. (filed May 11, 2018); and Silverberg v. Switch, Inc. et al. (filed June 6, 2018), were filed in the Eighth Judicial District of Nevada, and subsequently consolidated into a single case (the "State Court Securities Action"). Additionally, on June 11, 2018, one putative class action complaint captioned Cai v. Switch, Inc. et al. was filed in the United States District Court for the District of New Jersey (the "Federal Court Securities Action," and collectively with the State Court Securities Action, the "Securities Actions") and subsequently transferred to the Eighth Judicial District of Nevada in August 2018 and the federal court appointed Oscar Farach lead plaintiff. These lawsuits were filed against Switch, Inc., certain current and former officers and directors and certain underwriters of Switch, Inc.'s IPO alleging federal securities law violations in connection with the IPO. These lawsuits were brought by purported stockholders of Switch, Inc. seeking to represent a class of stockholders who purchased Class A common stock in or traceable to the IPO, and seek unspecified damages and other relief. In October 2018, the state court granted defendants motion to stay the State Court Securities Action in favor of the Federal Court Securities Action. In November 2018, the plaintiffs in the State Court Securities Action filed a petition for writ of mandamus challenging the stay order. In December 2018, the Supreme Court of Nevada directed Switch and other defendants to file an answer to the writ by February 2019. In October 2018, the lead plaintiff of the Federal Court Securities Action filed an amended complaint. In November 2018, Switch, Inc. and other defendants filed a motion to dismiss for failure to state a claim and a motion to strike. Switch, Inc. believes that these lawsuits are without merit and intends to continue to vigorously defend against them.

On September 10, 2018, two purported stockholders of Switch, Inc. filed substantially similar shareholder derivative complaints, respectively captioned Liu v. Roy et al., and Zhao v. Roy et al., in the Eighth Judicial District of Nevada, which were subsequently consolidated into a single case the "Derivative Shareholder Action"). These lawsuits allege breaches of fiduciary duty, unjust enrichment, waste of corporate assets, abuse of control, and gross mismanagement against certain current and former officers and directors of Switch, Inc. The plaintiffs also named Switch, Inc. as a nominal defendant. The complaints arise generally from the same allegations described in the State Court Securities Action and Federal Court Securities Action. The plaintiffs seek unspecified damages on Switch, Inc.'s behalf from the officer and director defendants, certain corporate governance actions, compensatory awards, and other relief. In December 2018, the court granted the parties' stipulation to stay the Derivative Shareholder Action until the Securities Actions are dismissed with prejudice or until the defendants file an answer in any of the Securities Actions.

The outcomes of the legal proceedings are inherently unpredictable, subject to significant uncertainties, and could be material to the Company's financial condition, results of operations, and cash flows for a particular period. Where the Company is a defendant, it will vigorously defend against the claims pleaded against it. These actions are each

in preliminary stages and management has determined that based on proceedings to date, it is currently unable to determine the probability of the outcome of these actions or the range of reasonably possible loss, if any.

10. Income Taxes

Income (loss) before income taxes for domestic and foreign operations is as follows:

	Years Ended December 31, 2018	Years Ended December 31, 2017
	(in thousands)	
Domestic	$ 31,379	$ (8,386)
Foreign	(118)	(1,175)
Total income (loss) before income taxes	$ 31,261	$ (9,561)

Components of income tax expense (benefit) consist of the following:

	Years Ended December 31, 2018	Years Ended December 31, 2017
	(in thousands)	
Current		
Federal	$ —	$ —
State and local	—	—
Total current income tax expense (benefit)	$ —	$ —
Deferred		
Federal	$ 1,939	$ (978)
State and local	4	(3)
Total deferred income tax expense (benefit)	$ 1,943	$ (981)
Total income tax expense (benefit)	$ 1,943	$ (981)

Switch's operations are primarily conducted in the state of Nevada, which does not have a corporate level income tax. A reconciliation of the U.S. statutory tax rate to the effective income tax rate is presented below:

	Years Ended December 31, 2018	Years Ended December 31, 2017
U.S statutory tax rate	21.0 %	35.0 %
Rate effect from pass-through entity	(17.0)	(34.8)
Partnership outside basis difference	—	26.2
Rate change impact due to tax reform	—	(7.0)
Other	2.2	(9.2)
Effective income tax rate	6.2 %	10.2 %

During the year ended December 31, 2018, Switch, Inc.'s effective income tax rate was impacted primarily by the recognition of the deferred tax asset associated with the outside basis difference on Switch, Inc.'s investment in Switch, Ltd. In addition, the TCJA enacted in December 2017 reduced the U.S. federal corporate rate from a top marginal rate of 35% to a flat rate of 21%, limited the NOL carryforward deduction to 80% of current year taxable income, and eliminated NOL carrybacks, among other provisions. The Company calculated its best estimate of the impact of the TCJA based on current interpretations and understanding of the TCJA and recorded a provisional tax benefit of $0.7 million for the year ended December 31, 2017 in accordance with SAB 118. During the fourth quarter of 2018, the Company finalized its calculations related to the impacts of the TCJA with no adjustment to the Company's previously recorded provisional tax benefit.

As Switch, Inc.'s IPO closed on October 11, 2017, and Switch, Inc. had no business transactions or activities prior to the IPO, with the exception of the issuance of one share at par value of $0.001 per share, which was canceled as of

the closing date of the IPO, no amounts related to the provision for income taxes were incurred for the period from January 1, 2017 to October 10, 2017 and the year ended December 31, 2016.

Significant components of Switch, Inc.'s deferred tax assets and liabilities were as follows as of:

	December 31,	
	2018	2017
	(in thousands)	
Deferred tax assets:		
Investment in partnership	$ 22,601	$ —
Net operating loss carryforwards	5,949	981
	28,550	981
Less: valuation allowance	—	—
	$ 28,550	$ 981
Deferred tax liabilities:		
Other	$ —	$ —
	$ —	$ —
Net deferred tax assets	$ 28,550	$ 981

As of December 31, 2018, Switch had a U.S. federal income tax net operating loss ("NOL") carryforward of $28.3 million available to offset future taxable income, of which $1.9 million will expire in 2037 and $26.4 million will be carried forward indefinitely under the TCJA. Switch also has state and local NOL carryforwards of $1.1 million, of which $0.1 million will expire in 2028, $0.2 million in 2037, and $0.8 million in 2038. Management believes on a more likely than not basis that Switch will be able to realize the tax benefit of its NOL carryforwards.

As a result of the increase in Switch, Inc.'s ownership of Switch, Ltd. following the exchanges of noncontrolling interest for Class A common stock during the year ended December 31, 2018 described in Note 13 "Noncontrolling Interest," the Company recorded a deferred tax asset related to the increase in the tax basis of Switch, Inc.'s ownership interest in Switch, Ltd. of $22.6 million as of December 31, 2018.

As of December 31, 2018, the Company concluded, based on the weight of all available positive and negative evidence, that all of its deferred tax assets are more likely than not to be realized.

The Company did not record any penalties or interest related to income taxes or uncertain tax positions, as management has concluded that no such positions exist, on the consolidated balance sheets as of December 31, 2018 and 2017. In addition, the Company did not record any penalties or interest related to income taxes on the consolidated statements of operations and comprehensive income (loss) during the years ended December 31, 2018, 2017, and 2016.

The Company is subject to examination for tax years beginning with the year ended December 31, 2017. The Company is not currently subject to income tax audits in any U.S. or state jurisdictions for any tax year.

Tax Receivable Agreement

Pursuant to the Company's election under Section 754 of the Code, the Company expects to obtain an increase in the tax basis of its ownership interest in the net assets of Switch, Ltd. following the redemption or exchange of noncontrolling interest for Class A common stock and other qualifying transactions. The Company intends to treat any redemptions and exchanges of noncontrolling interest as direct purchases of noncontrolling interest for U.S. federal income tax purposes. These increases in tax basis may reduce the amounts that the Company would otherwise pay in the future to various tax authorities. They may also decrease gains (or increase losses) on future dispositions of certain capital assets to the extent tax basis is allocated to those capital assets.

As of December 31, 2018, the Company has recorded a liability of $52.5 million under the TRA, which provides for the payment of 85% of the amount of the tax benefits, if any, that Switch, Inc. is deemed to realize as a result of increases in the tax basis of its ownership in Switch, Ltd. related to exchanges of noncontrolling interest for Class A common stock. See Note 13 "Noncontrolling Interest" for additional information.

11. Stockholders' Equity

As of December 31, 2018, under Switch, Inc.'s amended and restated articles of incorporation dated October 5, 2017, Switch, Inc. was authorized to issue: (i) 750 million shares of Class A common stock, par value $0.001 per share, (ii) 300 million shares of Class B common stock, par value $0.001 per share, (iii) 75 million shares of Class C common stock, par value $0.001 per share, and (iv) 10 million shares of blank check preferred stock, par value $0.001 per share. Holders of shares of Class A common stock, Class B common stock, and Class C common stock are entitled to one vote, one vote, and 10 votes, respectively, on all matters to be voted upon by the stockholders. Once the Founder Members and any permitted transferees beneficially own an aggregate of less than 50% of the number of shares of Class C common stock issued and outstanding as of the completion of the IPO, each share of Class C common stock will entitle its holder to one vote per share.

Dividends

Holders of shares of Class A common stock are entitled to receive cash dividends as may be declared from time to time at the sole discretion of Switch, Inc.'s Board of Directors. Holders of shares of Class B common stock and Class C common stock are not entitled to participate in any such dividends declared by Switch, Inc.'s Board of Directors. During the year ended December 31, 2018, Switch, Inc. paid cash dividends of $0.059 per share of Class A common stock and recorded a total of $3.0 million as a reduction of retained earnings from cash dividends declared by its Board of Directors. During the year ended December 31, 2017, Switch, Inc. paid cash dividends of $0.014 per share of Class A common stock and recorded a total of $0.5 million as a reduction of retained earnings from cash dividends declared by its Board of Directors.

The declaration, amount, and payment of any future dividends on shares of Class A common stock will be at the discretion of Switch, Inc.'s Board of Directors and will depend upon many factors, including Switch, Inc.'s results of operations, financial condition, capital requirements, restrictions in the 2017 Credit Agreement, and other factors that Switch, Inc.'s Board of Directors deems relevant.

12. Equity-Based Compensation

2005 Common Membership Unit Plan

In 2005, Switch, Ltd. established the 2005 Common Membership Unit Plan (the "Unit Option Plan") for the purpose of attracting and retaining the best available personnel for positions of substantial responsibility, to provide additional incentive to employees and consultants of Switch, and to promote the success of its business. All options granted under the Unit Option Plan were intended to be treated as non-statutory unit options under the Internal Revenue Code of 1986, as amended. The term of each option was the term stated in the option agreement, which was no more than 10 years from the date of grant. Options exercised under the Unit Option Plan provided the purchaser with full rights equivalent to those of existing members and holders as of the date of exercise.

The summary of unit option activity under the Unit Option Plan for the year ended December 31, 2018 is presented below:

	Number of Units (in thousands)	Weighted Average Exercise Price per Unit	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (in thousands)
Unit options outstanding—January 1, 2018	110	$ 2.85		
Exercised	(110)	2.85		
Unit options outstanding—December 31, 2018	—	$ —	—	$ —

The following additional disclosures are provided for unit options under the Unit Option Plan:

	Years Ended December 31,		
	2018	2017	2016
Weighted average grant date fair value of unit options	$ —	$ —	$ —
Total fair value of unit options vested (in thousands)	$ —	$ —	$ 271
Total aggregate intrinsic value of unit options exercised (in thousands)	$ 1,180	$ 869	$ 601

Common Unit Awards

In 2012, Switch, Ltd. began issuing common unit awards ("Incentive Units") containing a hurdle amount (similar to an exercise price) where employees benefited from any appreciation in the value of their awards above the hurdle amount under Switch, Ltd.'s then-current operating agreement. In connection with the effectiveness of the Switch Operating Agreement and closing of Switch, Inc.'s IPO, all outstanding Incentive Units, other than the unvested Common Unit awards discussed below, accelerated in full and were converted into Common Units after net settling the hurdle amount.

In September 2017, Switch, Ltd. granted 7.5 million Incentive Units to its Chief Executive Officer (the "CEO Award") and 1.5 million Incentive Units to its President with a hurdle amount of $11.69 per Incentive Unit (the "President Award"). The CEO Award contained a provision that caused the Incentive Units underlying the CEO Award to convert into Common Units on a one-to-one basis in connection with the closing of Switch, Inc.'s IPO. In connection with the effectiveness of the Switch Operating Agreement and closing of Switch, Inc.'s IPO, the CEO Award converted into 7.5 million Common Units and the President Award converted into 472,000 Common Units after net settling the hurdle amount. If a forfeiture of unvested Common Units under the CEO Award and the President Award occurs, the associated shares of Class C common stock and Class B common stock, respectively, are also forfeited.

The summary of Common Unit activity under the Switch Operating Agreement for the year ended December 31, 2018 is presented below:

	Number of Units (in thousands)	Weighted Average Grant Date Fair Value per Unit
Unvested Common Units—January 1, 2018	4,783	$ 11.11
Vested	(797)	$ 11.11
Unvested Common Units—December 31, 2018	3,986	$ 11.11

The following additional disclosures are provided for awards under Switch, Ltd.'s then-current operating agreement for the periods prior to Switch, Inc.'s IPO and awards under the Switch Operating Agreement for the periods after Switch, Inc.'s IPO:

	Years Ended December 31,		
	2018	2017	2016
Weighted average grant date fair value of Common Units	$ —	$ 7.39	$ 5.53
Total fair value of Common Units vested (in thousands)	$ 10,659	$ 1,115	$ 835
Weighted average grant date fair value of Incentive Units	$ —	$ 10.06	$ 2.04
Total aggregate intrinsic value of Incentive Units converted into Common Units (in thousands)	$ —	$ 318,033	$ —

The weighted average assumptions used in estimating the grant date fair value of the Incentive Unit awards, exclusive of the CEO Award, are listed in the table below:

	Years Ended December 31,	
	2017	2016
Expected volatility	29.3%	39.8%
Risk-free interest rate	1.4%	1.5%
Expected term (in years)	2.0	3.7
Dividend rate	0.6%	0.9%

As the CEO Award contained a provision that caused the Incentive Units underlying the CEO Award to convert into Common Units on a one-to-one basis in connection with the closing of Switch, Inc.'s IPO, the grant date fair value of the underlying units was $11.69 per unit.

As of December 31, 2018, total equity-based compensation cost related to all unvested Common Units is $23.6 million, which is expected to be recognized over a weighted average period of 2.78 years.

2017 Incentive Award Plan

In September 2017, Switch, Inc.'s Board of Directors adopted the 2017 Incentive Award Plan (the "2017 Plan"). The 2017 Plan, effective as of its adoption date, provides that the initial aggregate number of shares reserved and available for issuance is 25.0 million shares of Class A common stock plus an increase each January 1, beginning on January 1, 2018 and ending on and including January 1, 2027, equal to the lesser of (A) 17.0 million shares of Class A common stock, (B) 5% of the aggregate number of shares of Switch, Inc.'s Class A common stock, Class B common stock and Class C common stock outstanding on the final day of the immediately preceding calendar year and (C) such smaller number of shares of Class A common stock as is determined by the Board of Directors. Effective January 1, 2018, Switch, Inc.'s Board of Directors approved an increase of 7.9 million shares (the "2018 Annual Increase") in the aggregate number of shares of Class A common stock reserved and available for issuance under the 2017 Plan. The 2018 Annual Increase, and each annual increase thereafter, is subject to adjustment in the event of a stock split, stock dividend or other defined changes in Switch, Inc.'s capitalization.

The 2017 Plan allows for the grant of (i) stock options, including incentive stock options, (ii) stock appreciation rights, (iii) non-statutory stock options under the Internal Revenue Code of 1986, as amended, (iv) restricted stock awards ("RSAs"), (v) restricted stock units ("RSUs"), or (vi) other stock or cash based awards as may be determined by the plan's administrator from time to time. The term of each option award shall be no more than 10 years from the date of grant. Options exercised under the 2017 Plan provide the purchaser with full rights equivalent to those of existing Class A common stock holders and holders as of the date of exercise. The Company's policy for issuing shares upon stock option exercise is to issue new shares of Class A common stock. Additionally, the Switch Operating Agreement states that Switch, Ltd. will maintain at all times a one-to-one ratio between the number of Common Units owned by Switch, Inc. and the number of outstanding shares of Class A common stock, including those issued as a result of stock option exercises and vesting of RSU awards.

The 2017 Plan also provides for dividend equivalent units ("DEUs") based on the value of the dividends per share paid on the Company's Class A common stock, which are accumulated on RSUs during the vesting period. The DEUs vest and will be settled with shares of the Company's Class A common stock concurrently with the vesting of the associated RSUs based on the closing share price on the vesting date. Pursuant to the Company's policy, DEUs are treated as a reduction of retained earnings or, if the Company is in a retained deficit position, as a reduction of additional paid in capital.

The summary of stock option activity under the 2017 Plan for the year ended December 31, 2018 is presented below:

	Number of Stock Options (in thousands)	Weighted Average Exercise Price per Stock Option	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding—January 1, 2018	5,725	$ 17.00		
Granted	2,085	$ 6.97		
Expired	(458)	$ 17.00		
Outstanding—December 31, 2018	7,352	$ 14.16	9.06	$ 63
Fully vested and expected to vest—December 31, 2018	7,352	$ 14.16	9.06	$ 63
Exercisable—December 31, 2018	5,201	$ 17.00	8.70	$ —

The following additional disclosures are provided for stock options under the 2017 Plan:

	Years Ended December 31,	
	2018	2017
Weighted average grant date fair value	$ 1.84	$ 5.00
Total fair value of stock options vested (in thousands)	$ 176	$ 28,073

The weighted average assumptions used in estimating the grant date fair value of stock options are listed in the table below:

	Years Ended December 31,	
	2018	2017
Expected volatility	28.2%	31.8%
Risk-free interest rate	2.8%	1.9%
Expected term (in years)	5.9	5.0
Dividend rate	1.7%	0.6%

As of December 31, 2018, total equity-based compensation cost related to all unvested stock options was $3.8 million, which is expected to be recognized over a weighted average period of 3.12 years.

The summary of RSU activity under the 2017 Plan for the year ended December 31, 2018 is presented below:

	Number of Units (in thousands)	Weighted Average Grant Date Fair Value per Unit
Unvested RSUs—January 1, 2018	31	$ 18.01
Granted	3,091	$ 15.03
Vested	(190)	$ 15.53
Forfeited	(143)	$ 16.95
Unvested RSUs—December 31, 2018	2,789	$ 14.93

The following additional disclosures are provided for RSU awards under the 2017 Plan:

	Years Ended December 31,	
	2018	2017
Weighted average grant date fair value	$ 15.03	$ 18.01
Total fair value of shares vested (in thousands)	$ 2,925	$ 365

As of December 31, 2018, total equity-based compensation cost related to all unvested RSU awards was $32.5 million, which is expected to be recognized over a weighted average period of 3.07 years.

The summary of RSA activity under the 2017 Plan for the year ended December 31, 2018 is presented below:

	Number of Awards (in thousands)	Weighted Average Grant Date Fair Value per Award
Unvested RSAs—January 1, 2018	—	$ —
Granted	61	$ 13.08
Unvested RSAs—December 31, 2018	61	$ 13.08

As of December 31, 2018, total equity-based compensation cost related to all unvested RSAs was $0.3 million, which is expected to be recognized over a weighted average period of 0.43 years.

Total equity-based compensation recognized on the consolidated statements of operations and comprehensive income (loss) was as follows:

	Years Ended December 31,		
	2018	2017	2016
	(in thousands)		
Cost of revenue	$ 1,468	$ 1,289	$ 181
Selling, general and administrative expense	34,265	83,501	5,754
Total equity-based compensation expense	$ 35,733	$ 84,790	$ 5,935

13. Noncontrolling Interest

Ownership

Switch, Inc. owns an indirect minority economic interest in Switch, Ltd., where “economic interests” means the right to receive any distributions, whether cash, property or securities of Switch, Ltd., in connection with Common Units. Switch, Inc. presents interest held by noncontrolling interest holders within noncontrolling interest in the consolidated financial statements. During the year ended December 31, 2018, Switch, Inc. issued an aggregate of 19.1 million shares of Class A common stock to Members in connection with such Members’ redemptions of an equivalent number of Common Units and the corresponding cancellation of an equivalent number of Switch, Inc.’s Class B common stock. The redemptions occurred pursuant to the terms of the Switch Operating Agreement.

In August 2018, Switch, Inc.’s Board of Directors authorized a program by which Switch, Ltd. may repurchase up to $150.0 million of its outstanding Common Units for cash and Switch, Inc. will cancel a corresponding amount of its shares of Class B common stock. The program was effective immediately upon authorization. The authorization may be suspended or discontinued at any time without notice. Repurchases under the Common Unit repurchase program will be funded from Switch’s existing cash and cash equivalents. In August 2018, Switch, Ltd. repurchased 6.1 million of its outstanding Common Units for $60.6 million. Pursuant to this repurchase, Switch, Inc. canceled an equivalent amount of its shares of Class B common stock.

The ownership of the Common Units is summarized as follows:

	December 31,			
	2018		2017	
	Units	Ownership %	Units	Ownership %
	(units in thousands)			
Switch, Inc.’s ownership of Common Units[(1)]	55,157	22.7%	35,938	14.5%
Noncontrolling interest holders’ ownership of Common Units[(2)]	187,440	77.3%	211,676	85.5%
Total Common Units	242,597	100.0%	247,614	100.0%

(1) Common Units held by Switch, Inc. as of December 31, 2018 exclude 61,000 Common Units underlying unvested RSAs.

(2) Common Units held by noncontrolling interest holders as of December 31, 2018 exclude 4.0 million unvested Common Unit awards. Common Units held by noncontrolling interest holders as of December 31, 2017 exclude 4.8 million unvested Common Unit awards and 110,000 vested and exercisable unit options.

The Company uses the weighted average ownership percentages during the period to calculate the income (loss) before income taxes attributable to Switch, Inc. and the noncontrolling interest holders of Switch, Ltd.

Distributions

Prior to the payment of Switch, Inc.’s Class A common stock dividends during the year ended December 31, 2018, Switch, Ltd. made cash distributions to holders of Common Units, excluding Switch, Inc., of $0.059 per Common Unit for a total distribution of $11.6 million.

During the year ended December 31, 2017, Switch, Ltd.’s Board of Managers for the period prior to the IPO and Switch, Inc.’s Board of Directors for the period subsequent to the IPO approved distributions of $185.4 million, comprised of $112.0 million to Switch, Ltd.’s members in accordance with their percentage interests (inclusive of $8.2 million distributed to members upon the accelerated vesting of Incentive Units in connection with the closing of the IPO) and $73.4 million to certain of Switch, Ltd.’s members with unreturned capital contributions in accordance with Switch, Ltd.’s then-current operating agreement.

14. Net Income (Loss) Per Share/Unit

The following table sets forth the calculation of basic and diluted net income (loss) per share/unit:

	Years Ended December 31,		
	2018	2017	2016
	(in thousands, except per share/unit data)		
Net income (loss) per share/unit:			
Numerator—basic and diluted:			
Net income (loss) attributable to Switch, Inc.—basic and diluted	$ 4,052	$ (15,208)	$ 31,368
Denominator—basic:			
Weighted average shares/units outstanding—basic[(1)]	45,682	8,074	199,047
Net income (loss) per share/unit—basic	$ 0.09	$ (1.88)	$ 0.16
Denominator—diluted:			
Weighted average shares/units outstanding—basic[(1)]	45,682	8,074	199,047
Weighted average effect of dilutive securities:			
Unit options	50	—	230
Unvested Incentive Units	—	—	4,184
RSUs	6	—	—
DEUs	8	—	—
RSAs	7	—	—
Weighted average shares/units outstanding—diluted[(1)]	45,753	8,074	203,461
Net income (loss) per share/unit—diluted	$ 0.09	$ (1.88)	$ 0.15

(1) Amounts for the years ended December 31, 2018 and 2017 represent shares of Class A common stock. Amounts for the year ended December 31, 2016 represent Common Units.

Shares of Class B common stock and Class C common stock do not share in the earnings or losses of Switch, Inc. and are therefore not participating securities. As such, separate calculations of basic and diluted net income (loss) per share for each of Class B common stock and Class C common stock under the two-class method have not been presented.

The following table presents potentially dilutive securities excluded from the computation of diluted net income (loss) per share/unit for the periods presented because their effect would have been anti-dilutive.

	Years Ended December 31,		
	2018	2017	2016
	(in thousands)		
Weighted average unvested Incentive Units	—	—	533
Stock options[(1)]	7,352	5,725	—
RSUs[(1)]	2,228	31	—
Shares of Class B and Class C common stock[(2)]	191,426	216,569	—

(1) Represents the number of instruments outstanding at the end of the period. Application of the treasury stock method would reduce this amount if they had a dilutive effect and were included in the computation of diluted net income (loss) per share.

(2) Shares of Class B common stock and Class C common stock at the end of the period are considered potentially dilutive shares of Class A common stock under application of the if-converted method.

15. Segment Reporting

The Company's chief operating decision maker is its Chief Executive Officer. The Company manages its operations as a single operating segment for the purposes of assessing performance and making operating decisions. All of the Company's assets are maintained in the United States, although the Company holds an equity method investment in SUPERNAP International, which has deployed facilities in Italy and Thailand. The Company derives almost all of its revenue from sales to customers in the United States, based upon the billing address of the customer. Revenue derived from customers outside the United States, based upon the billing address of the customer, was less than 2% of revenue for each year presented.

The Company's revenue is comprised of the following:

	Years Ended December 31,		
	2018	2017	2016
	(in thousands)		
Colocation	$ 324,209	$ 304,720	$ 259,046
Connectivity	74,006	67,690	53,715
Other	7,645	5,865	5,591
Revenue	$ 405,860	$ 378,275	$ 318,352

16. Quarterly Financial Information (Unaudited)

Quarterly financial information is presented below:

	Year Ended December 31, 2018				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
	(amounts in thousands, except per share data)				
Revenue	$ 97,717	$ 102,161	$ 102,768	$ 103,214	$ 405,860
Gross profit	$ 42,861	$ 46,967	$ 43,618	$ 48,001	$ 181,447
Net income	$ 3,950	$ 9,539	$ 4,663	$ 11,166	$ 29,318
Net income attributable to Switch, Inc.	$ 671	$ 821	$ 6	$ 2,554	$ 4,052
Basic net income per share	$ 0.02	$ 0.02	$ 0.00	$ 0.05	$ 0.09
Diluted net income per share	$ 0.02	$ 0.02	$ 0.00	$ 0.05	$ 0.09

	Year Ended December 31, 2017				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
	(amounts in thousands, except per unit/share data)				
Revenue	$ 89,157	$ 92,101	$ 97,689	$ 99,328	$ 378,275
Gross profit	$ 43,782	$ 43,645	$ 46,945	$ 45,673	$ 180,045
Net income (loss)	$ 20,328	$ 14,953	$ 16,486	$ (60,347)	$ (8,580)
Net income (loss) attributable to Switch, Inc.	$ 20,328	$ 14,953	$ 16,486	$ (66,975)	$ (15,208)
Basic net income (loss) per unit/share	$ 0.10	$ 0.07	$ 0.08	$ (2.09)	$ (1.88)
Diluted net income (loss) per unit/share	$ 0.10	$ 0.07	$ 0.08	$ (2.09)	$ (1.88)

17. Subsequent Events

In January and February 2019, Switch, Ltd. entered into four interest rate swap agreements; whereby, Switch, Ltd. will pay a weighted average fixed interest rate (excluding the applicable interest margin) of 2.48% on notional amounts corresponding to borrowings of $400.0 million in exchange for receipts on the same notional amount at a variable interest rate based on the applicable LIBOR at the time of payment. The interest rate swap agreements mature in June 2024.

In March 2019, Switch, Inc.'s Board of Directors declared a dividend of $0.0294 per share of Class A common stock, for a total estimated to be $1.6 million, to be paid on April 4, 2019 to holders of record as of March 25, 2019. Prior to the payment of this dividend, Switch, Ltd. will make a cash distribution to all holders of record of Common Units, including Switch, Inc., of $0.0294 per Common Unit, for a total estimated to be $7.2 million.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated, as of December 31, 2018, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as amended, or the Exchange Act). Based on their evaluation, as of December 31, 2018, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective because of the material weaknesses in our internal control over financial reporting described below.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Management's Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Our management, including our Chief Financial Officer and Chief Executive Officer, evaluated, as of December 31, 2018, the effectiveness of our internal control over financial reporting based on the framework and criteria established in Internal Control - Integrated Framework (2013 Framework) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on their evaluation, as of December 31, 2018, our management concluded that our internal control over financial reporting was not effective because of the material weaknesses described below.

As of December 31, 2018, we had two material weaknesses in our internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

The first material weakness was identified in connection with the audit of our 2016 consolidated financial statements. This material weakness was due to a failure of the information and communication component of internal control to provide complete and accurate output because of deficiencies in the communication process. Contracts executed by various departments were not communicated, on a timely basis, to the accounting department, resulting in recording of out-of-period adjustments that impacted the recognition and disclosure of amounts in the consolidated financial statements during the year ended December 31, 2016. We concluded this material weakness continued to exist as of December 31, 2018.

The second material weakness, which was identified in connection with the audit of our 2017 consolidated financial statements, related to an insufficient complement of resources with an appropriate level of accounting expertise, knowledge, and training commensurate with the complexity of our financial reporting matters. This material weakness led to pervasive immaterial adjustments to our annual and interim consolidated financial statements, inadequate review over account reconciliations and the inability to maintain segregation of duties over journal entries resulting in the lack of an effective control environment. We concluded this material weakness continued to exist as of December 31, 2018.

Additionally, these material weaknesses could result in a misstatement of substantially all account balances or disclosures that would result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected.

This annual report does not include an audit report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to audit by the Company's registered public accounting firm pursuant to rules of the SEC that permit the Company to provide only management's report in this annual report.

Material Weakness Remediation Efforts

We have implemented and continue to implement measures designed to improve our internal control over financial reporting to remediate these material weaknesses, including hiring additional personnel with appropriate education,

experience and certifications for key positions in the financial reporting and accounting function, implementing policies and procedures to improve our ability to communicate and share information in a timely manner, as well as designing and implementing improved processes and internal controls. In addition, we are formalizing our internal control documentation and strengthening supervisory reviews by our management.

While we believe that these efforts will improve our internal control over financial reporting, the implementation of these measures is ongoing and will require validation and testing of the design and operating effectiveness of internal controls over a sustained period of financial reporting cycles. Due to this ongoing testing, we cannot provide assurance that the measures we have taken to date, and are continuing to implement, will be sufficient to remediate the material weaknesses we have identified or avoid potential future material weaknesses. If the steps we take do not correct the material weaknesses in a timely manner, we will be unable to conclude that we maintain effective internal control over financial reporting. Accordingly, there could continue to be a reasonable possibility that a material misstatement of our financial statements would not be prevented or detected on a timely basis.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) identified in connection with the evaluation of our internal control performed during the quarter ended December 31, 2018, to which this report relates, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Not applicable.

Part III.

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item is incorporated by reference to the Proxy Statement for the 2019 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2018.

Item 11. Executive Compensation.

The information required by this item is incorporated by reference to the Proxy Statement for the 2019 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2018.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Securities authorized for issuance under equity compensation plans

The table below provides information about our compensation plans under which our Class A common stock is authorized for issuance as of December 31, 2018. See Note 12 to the consolidated financial statements included in Part II, Item 8 for a description of these compensation plans.

	Equity Compensation Plan Information		
Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)[2]	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)[3]
Equity compensation plans approved by security holders[1]	10,140,777	$ 14.16	22,600,243

(1) Includes awards granted and available to be granted under our 2017 Incentive Award Plan.

(2) The weighted average exercise price does not include restricted stock units granted under our 2017 Incentive Award Plan.

(3) Our 2017 Incentive Award Plan provides for annual increases, each January 1, beginning on January 1, 2018 and ending on and including January 1, 2027, equal to the lesser of (A) 17.0 million shares of Class A common stock, (B) 5% of the aggregate number of shares of our Class A common stock, Class B common stock and Class C common stock outstanding on the final day of the immediately preceding calendar year and (C) such smaller number of shares of Class A common stock as is determined by our board of directors.

Certain information required by this item is incorporated by reference to the Proxy Statement for the 2019 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2018.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item is incorporated by reference to the Proxy Statement for the 2019 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2018.

Item 14. Principal Accounting Fees and Services.

The information required by this item is incorporated by reference to the Proxy Statement for the 2019 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2018.

Part IV.

Item 15. Exhibits, Financial Statement Schedules.

The following documents are filed as part of this report:

(1) Financial statements:

	Page
Consolidated Balance Sheets	74
Consolidated Statements of Operations and Comprehensive Income (Loss)	75
Consolidated Statements of Stockholders'/Members' Equity	76
Consolidated Statements of Cash Flows	78
Notes to Consolidated Financial Statements	80

(2) Financial statement schedules:

All financial statement schedules are omitted since they are not required or are not applicable, or the required information is included in the consolidated financial statements or notes thereto.

(3) Exhibits:

		Incorporated by Reference		
Exhibit No.	Exhibit Description	Form	Exhibit	Filing Date
3.1	Amended and Restated Articles of Incorporation of Switch, Inc.	8-K	3.1	10/11/2017
3.2	Amended and Restated Bylaws of Switch, Inc.	8-K	3.2	10/11/2017
10.1	Tax Receivable Agreement, dated October 5, 2017, by and among Switch, Inc., Switch, Ltd., and each other person from time to time party thereto.	8-K	10.1	10/11/2017
10.2	Amended and Restated Registration Rights Agreement, dated October 5, 2017, by and among Switch, Inc., Switch, Ltd. and each other person from time to time party thereto.	8-K	10.2	10/11/2017
10.3	Fifth Amended and Restated Operating Agreement of Switch, Ltd., dated October 5, 2017, by and among Switch, Ltd. and its Members.	8-K	10.3	10/11/2017
10.4	Amended and Restated Credit Agreement, dated as of June 27, 2017, by and among Switch, Ltd., as borrower, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent.	S-1	10.4	9/8/2017
10.4(a)	First Amendment to Amended and Restated Credit Agreement dated as of December 28, 2017.	8-K	10.1	12/28/2017
10.5	Amended and Restated Collateral Agreement, dated as of June 27, 2017, by and among Switch, Ltd., as borrower, certain of its subsidiaries and Wells Fargo Bank, National Association, as administrative agent.	S-1	10.5	9/8/2017
10.6	Amended and Restated Subsidiary Guaranty Agreement, dated as of June 27, 2017, by and among Switch, Ltd., as borrower, certain of its subsidiaries and Wells Fargo Bank, National Association, as administrative agent.	S-1	10.6	9/8/2017
10.7†	Switch, Inc. 2017 Incentive Award Plan.	S-1/A	10.7	9/25/2017
10.7(a)†	Form of Stock Option Agreement under Switch, Inc. 2017 Incentive Award Plan.	S-1/A	10.7(a)	9/25/2017
10.7(b)†	Form of Restricted Stock Agreement under Switch, Inc. 2017 Incentive Award Plan.	S-1/A	10.7(b)	9/25/2017
10.7(c)†	Form of Restricted Stock Unit Grant under Switch, Inc. 2017 Incentive Award Plan.	10-Q	10.1	11/14/2017
10.8†	Offer Letter, dated January 7, 2016, by and between Switch, Ltd. and Gabe Nacht.	S-1/A	10.8	9/25/2017
10.9	Form of Indemnification Agreement entered into between Switch, Inc. and certain of its directors and officers, effective October 11, 2017.	S-1	10.9	9/8/2017

Exhibit No.		Exhibit Description	Incorporated by Reference Form	Exhibit	Filing Date
10.10		Standard Industrial Real Estate Lease, dated August 21, 2007, by and between Switch, Ltd. (f/k/a Switch Communications Group L.L.C.) and Beltway Business Park Warehouse No. 3, LLC, as amended by (i) First Amendment to Lease, dated January 25, 2008, (ii) Confirmation of Initial Lease Term and Amendment to Lease, dated April 28, 2008, (iii) Third Amendment to Lease, dated January 21, 2011, (iv) Fourth Amendment to Lease, dated August 9, 2013, and (v) Fifth Amendment to Lease, dated June 21, 2016.	S-1/A	10.10	9/25/2017
10.11		Lease Agreement, dated November 4, 2010, by and between Switch, Ltd. (f/k/a Switch Communications Group L.L.C.) and Beltway Business Park Office No. 1, LLC, as amended by (i) First Amendment to Lease, dated April 1, 2011, (ii) Second Amendment to Lease, dated September 25, 2012, and (iii) Third Amendment to Lease, dated February 1, 2014.	S-1/A	10.11	9/25/2017
10.12		Lease Agreement, dated April 1, 2011, by and between Switch, Ltd. (f/k/a Switch Communications Group L.L.C.) and Beltway Business Park Office No. 1, LLC, as amended by (i) First Amendment to Lease, dated July 23, 2014, and (ii) Second Amendment to Lease, dated May 27, 2016.	S-1/A	10.12	9/25/2017
10.13		Land Lease, dated January 12, 2012, by and between Switch, Ltd. (f/k/a Switch Communications Group L.L.C.) and Beltway Business Park Warehouse No. 4, LLC, as amended by (i) Confirmation of Lease Term and Amendment to Lease, dated February 22, 2013, and (ii) First Amendment to Lease, dated June 21, 2016.	S-1/A	10.13	9/25/2017
10.14		Lease Agreement, dated April 24, 2012, by and between InNEVation L.L.C. and Beltway Business Park Office No. 2, LLC, as amended by (i) First Amendment to Lease, dated February 19, 2013, (ii) Second Amendment to Lease, dated March 14, 2013, (iii) Third Amendment to Lease, dated August 20, 2013, (iv) Fourth Amendment to Lease, dated September 1, 2013, (v) Fifth Amendment to Lease, dated January 12, 2015, (vi) Sixth Amendment to Lease, dated January 19, 2015, (vii) Seventh Amendment to Lease, dated November 15, 2015, and (viii) Eighth Amendment to Lease, dated January 17, 2017.	S-1/A	10.14	9/25/2017
10.15		Standard Industrial Real Estate Lease, dated November 3, 2014, by and between Switch, Ltd. and Beltway Business Park Warehouse No. 1, LLC.	S-1/A	10.15	9/25/2017
10.16		Land Lease, dated June 21, 2016, by and between Switch, Ltd. and Beltway Business Park Warehouse No. 6, LLC, as amended by Confirmation of Lease Term and Amendment to Lease, dated March 22, 2017.	S-1/A	10.16	9/25/2017
10.17†		LTIP Incentive Unit Award Agreement, by and between Switch, Ltd. and Rob Roy, dated September 7, 2017.	S-1/A	10.17	9/25/2017
10.18†		Incentive Unit Award Agreement, by and between Switch, Ltd. and Thomas Morton, dated September 7, 2017.	S-1/A	10.18	9/25/2017
10.19†		Switch, Inc. Director Compensation Program.	S-1/A	10.19	9/25/2017
10.20†		Restricted Stock Unit Award Agreement between Switch, Inc. and Rob Roy dated December 27, 2017.	8-K	10.2	12/28/2017
21.1	*	Subsidiaries of Switch, Inc.			
23.1	*	Consent of PricewaterhouseCoopers LLP.			
24.1	*	Power of Attorney (included on signature page)			
31.1	*	Certification of the Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.			
31.2	*	Certification of the Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.			
32.1	#	Certifications of the Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.			
101.INS	*	XBRL Instance Document (submitted electronically herewith).			
101.SCH	*	XBRL Taxonomy Extension Schema Document (submitted electronically herewith).			
101.CAL	*	XBRL Taxonomy Extension Calculation Linkbase Document (submitted electronically herewith).			

Exhibit No.		Exhibit Description	Incorporated by Reference		
			Form	Exhibit	Filing Date
101.DEF	*	XBRL Extension Definition Linkbase Document (submitted electronically herewith).			
101.LAB	*	XBRL Taxonomy Label Linkbase Document (submitted electronically herewith).			
101.PRE	*	XBRL Taxonomy Extension Presentation Linkbase Document (submitted electronically herewith).			

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* Filed herewith.
\# Furnished herewith.
† Indicates a management contract or compensatory plan or arrangement.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of the Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Switch, Inc.
(Registrant)

Date: March 18, 2019

/s/ Gabe Nacht

Gabe Nacht
Chief Financial Officer
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Rob Roy, Thomas Morton, and Gabe Nacht, and each one of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in their name, place, and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K and any documents related to this report and filed pursuant to the Securities Exchange Act of 1934, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date:	March 18, 2019	/s/ Rob Roy Rob Roy *Chief Executive Officer and Chairman of the Board of Directors* (Principal Executive Officer)
Date:	March 18, 2019	/s/ Gabe Nacht Gabe Nacht *Chief Financial Officer* (Principal Financial and Accounting Officer)
Date:	March 18, 2019	/s/ Donald D. Snyder Donald D. Snyder *Director*
Date:	March 18, 2019	/s/ Tom Thomas Tom Thomas *Director*
Date:	March 18, 2019	/s/ Bryan Wolf Bryan Wolf *Director*
Date:	March 18, 2019	/s/ Zareh Sarrafian Zareh Sarrafian *Director*
Date:	March 18, 2019	/s/ Kimberly Sheehy Kimberly Sheehy *Director*

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Section 2: EX-21.1 (EXHIBIT 21.1)

Exhibit 21.1

The following is a list of significant subsidiaries of Switch, Inc., omitting subsidiaries which, considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary as of December 31, 2018.

Legal Name	State of Organization
Switch, Ltd.	Nevada
InNEVation, LLC	Nevada
MI GRR, LLC	Michigan
NAPO1, LLC	Nevada
NV NAP 2, LLC	Nevada
NV NAP 4, LLC	Delaware
NV NAP 5, LLC	Nevada
NV NAP 7, LLC	Nevada
NV NAP 8, LLC	Nevada
NV NAP 9, LLC	Nevada

SUPERNAP Atlanta, LLC	Georgia
SUPERNAP Reno, LLC	Nevada
Switch Business Solutions, LLC	Nevada

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Section 3: EX-23.1 (EXHIBIT 23.1)

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-220908) of Switch, Inc. of our report dated March 18, 2019 relating to the financial statements, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Las Vegas, Nevada
March 18, 2019

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Section 4: EX-31.1 (EXHIBIT 31.1)

Exhibit 31.1

CERTIFICATION BY THE CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Rob Roy, certify that:

1. I have reviewed this Annual Report on Form 10-K of Switch, Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report.

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made

known to us by others within those entities, particularly during the period in which this report is being prepared;

b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting, which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 18, 2019

By: /s/ Rob Roy

Rob Roy
Chief Executive Officer
Principal Executive Officer

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Section 5: EX-31.2 (EXHIBIT 31.2)

Exhibit 31.2

CERTIFICATION BY THE CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gabe Nacht, certify that:

1. I have reviewed this Annual Report on Form 10-K of Switch, Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report.

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) and 15d-15(e) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting, which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 18, 2019

By: /s/ Gabe Nacht
Gabe Nacht
Chief Financial Officer
Principal Financial Officer

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Section 6: EX-32.1 (EXHIBIT 32.1)

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of Switch, Inc. (the "Company") for the fiscal year ended December 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Rob Roy, Chief Executive Officer, and Gabe Nacht, Chief Financial Officer, of the Company, do each certify, pursuant to Section 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
2. the information contained in the Report fairly presents, in all materials respects, the financial condition and results of operations of the Company.

Date: March 18, 2019

By: /s/ Rob Roy
Rob Roy
Chief Executive Officer
Principal Executive Officer

By: /s/ Gabe Nacht
Gabe Nacht
Chief Financial Officer
Principal Financial Officer

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